A REVIEW OF THE GENERA OF NEW WORLD MYMARIDAE (HYMENOPTERA: CHALCIDOIDEA)

by

Carl M. Yoshimoto

FLORA & FAUNA HANDBOOK NO. 7

SANDHILL CRANE PRESS, INC.

FLORA & FAUNA HANDBOOK NO. 7

A REVIEW OF THE GENERA OF NEW WORLD MYMARIDAE

(HYMENOPTERA: CHALCIDOIDEA)

90-03635/

Flora & Fauna Handbooks

This series of handbooks provides for the publication of book length working tools useful to systematics for the identification of specimens, as a source of ecological and life history information, and for information about the classification of plant and animal taxa. Each book is sequentially numbered, starting with Handbook No. 1, as a continuing series. The books are available by subscription or singly.

Each book treats a single biological group of organisms (e.g., family, subfamily, single genus, etc.) or the ecology of certain organisms or certain regions. Catalogs and checklists of groups not covered in other series are included in this series.

The books are complete by themselves, not a continuation or supplement to an existing work, or requiring another work in order to use this one. The books are comprehensive, and therefore, of general interest.

Books in this series to date are:

Handbook No. 1 - THE SEDGE MOTHS, by John B. Heppner

Handbook No. 2 - INSECTS AND PLANTS: Parallel Evolution and Adaptations, by Pierre Jolivet

Handbook No. 3 - THE POTATO BEETLES, by Richard L. Jacques, Jr.

Handbook No. 4 - THE PREDACEOUS MIDGES OF THE WORLD, by Willis W. Wirth and William L. Grogan, Jr.

Handbook No. 5 - A CATALOG OF THE NEOTROPICAL COLLEMBOLA, by José A. Mari Mutt and Peter F. Bellinger

Handbook No. 6 - THE ENDANGERED ANIMALS OF THAILAND, by Stephen R. Humphries and James R. Bain.

Handbook No. 7 - A REVIEW OF THE GENERA OF NEW WORLD MYMARIDAE, by Carl M. Yoshimoto.

FLORA & FAUNA HANDBOOK NO. 7

A REVIEW OF THE GENERA OF NEW WORLD MYMARIDAE

(Hymenoptera: Chalcidoidea)

Carl M. Yoshimoto
Canadian Forestry Service
Forestry Canada, Ottawa

SANDHILL CRANE PRESS, INC.
Gainesville, Florida
1990

Editor: Ross H. Arnett, Jr.
Production: Michael C. Thomas

Copyright 1990 by Sandhill Crane Press

All rights reserved. No part of this book may be reproduced in any form or by any means without permission in writing from the authors and publishers, except that the scientific data herein is a part of the public domain.

ISBN 1-877743-04-6

A FLORA & FAUNA HANDBOOK

Library of Congress Cataloging in Publication Data:

Yoshimoto, Carl M.
A review of the genera of New World Mymaridae (Hymenoptera, Chalcidoidea) / Carl M. Yoshimoto.
p. cm. -- (Flora & fauna handbook : no. 7)
Includes bibliographical references.
ISBN 1-877743-04-6 : $29.95
1. Mymaridae--Classification. I. Title. II. Series.
QL568.M94Y67 1990
595.79--dc20 89-70311
CIP

Manufactured in the United States of America

Sandhill Crane Press,
2406 N.W, 47th Terrace
Gainesville, FL 32606 USA

Generic Review of the Mymaridae

CONTENTS

Abstract viii
Chapter 1. Introduction 1
    Methods and materials 1
Chapter 2. 4
    Placement of Mymaridae 4
    Family diagnosis 6
    Hosts 7
Chapter 3. Keys to genera of Mymaridae of the New world 8
    Key to genera of female Mymaridae of the New World 8
    Key to genera of male Mymaridae of the New World 16
Chapter 4. The Genera 23
Genus 1. *Alaptus* Westwood 23
Genus 2. *Litus* Haliday 24
Genus 3. *Neolitus* Ogloblin 24
Genus 4. *Dicopus* Enock 25
Genus 5. *Callodicopus* Ogloblin 26
Genus 6. *Dicopomorpha* Ogloblin 26
Genus 7. *Myrmecomymar* n. genus 28
Genus 8. *Arescon* Walker 29
Genus 9. *Hadromymar* n. genus 30
Genus 10. *Camptoptera* Foerster 32
    Subgenus *Camptoptera* Foerster 33
    Subgenus *Macrocamptoptera* Girault 34
Key to subgenera of the New World *Camptoptera* 35
Genus 11. *Ooctonus* Haliday 35
Genus 12. *Gonatocerus* Nees 36
    litoralis species-group 37
    membraciphagus species-group 38
    ater species-group 38
    masneri species-group 38
    sulphuripes species-group 39
Key to the species-group of the New World *Gonatocerus* 41
Genus 13. *Anagroidea* Girault 42
Genus 14. *Anagrus* Haliday 43
Genus 15. *Stethynium* Enock 44
Genus 16. *Neostethynium* Ogloblin 45
Genus 17. *Erythmelus* Enock 45
Genus 18. *Notomymar* Doutt and Yoshimoto 46
Genus 19. *Idiocentrus* Gahan 47
Genus 20. *Omyomymar* Schauff 48
Genus 21. *Australomymar* Girault 48
Genus 22. *Caenomymar* n. genus 49
Genus 23. *Anaphes* Haliday 50

Subgenus *Anaphes* Haliday 52
Subgenus *Austranaphes* Ogloblin 53
Subgenus *Patasson* Walker 53
Key to the subgenera of the New World *Anaphes* 54
Genus 24. *Schizophagma* Ogloblin 54
Genus 25. *Cleruchus* Enock 55
Genus 26. *Eucleruchus* Ogloblin 56
Genus 27. *Ptilomymar* Annecke and Doutt 57
Genus 28. *Eustochus* Haliday 57
Genus 29. *Tanaomymar* Annecke and Doutt 58
Genus 30. *Bruchomymar* Ogloblin 59
Genus 31. *Mymar* Curtis 59
Genus 32. *Neomymar* Crawford 60
Genus 33. *Erdosiella* Soyka 61
Genus 34. *Entrichopteris* n. genus 62
Genus 35. *Masonana* n. genus 63
Genus 36. *Oncomymar* Ogloblin 64
Genus 37. *Scolopsopteron* Ogloblin 65
Genus 38. *Nesopolynema* Ogloblin 65
Genus 39. *Cremnomymar* Ogloblin 66
Genus 40. *Parapolynema* Fidalgo 67
Genus 41. *Polynemula* Ogloblin 67
Genus 42. *Tetrapolynema* Ogloblin 68
Genus 43. *Restisoma* n.genus 68
Genus 44. *Caraphractus* Walker 70
Genus 45. *Chaetomymar* Ogloblin 70
Genus 46. *Cnecomymar* Ogloblin 71
Genus 47. *Stephanodes* Enock 72
Genus 48. *Kalopolynema* Ogloblin 72
Genus 49. *Platypolynema* Ogloblin 73
Genus 50. *Tanyostethium* n. genus 74
Genus 51. *Acmopolynema* Ogloblin 75
bifasciatipennis species-group 76
helavai species-group 76
pecki species-group 77
plaumanni species-group 77
Key to the species-groups of New World *Acmopolynema* 78
Genus 52. *Platyfrons* n. genus 79
Genus 53. *Formicomymar* n. genus 80
Genus 54. *Polynema* Haliday 81
Descriptions of new species 84
Myrmecomymar masneri n. sp 84
Hadromymar masoni n. sp 86
Gonatocerus helavai n. sp 87
Gonatocerus masneri n. sp 88
Anagroidea boweni n. sp 89

Caenomymar howdeni n. sp 91
Notomymar masneri n. sp 92
Ptilomymar magnificum n. sp 93
Eustochus nearcticus n.sp 96
Tanaomymar venezuelaensis n. sp 97
Entrichopteris eberhardi n. sp 99
Masonana polynemoides n. sp 100
Restisoma howdeni n. sp 102
Tanyostethium elongatum n. sp 103
Acmopolynema helavai n. sp 104
Acmopolynema pecki n. sp 105
Acmopolynema plaumanni n. sp 107
Platyfrons helavai n. sp 108
Formicomymar venezuelaensis n. sp 110
Acknowledgements 111
References 112
List of Abbreviations used in Figures 125
Index 165

Abstract

The New World Mymaridae include 59 genera and subgenera of which 9 are described as new. In addition, 19 species are described herein. The newly described taxa are: *Myrmecomymar masneri* n. genus, n. sp.; *Hadromymar masoni* n. genus, n. sp.; *Gonatocerus helavai*, n. sp.; *G. masneri* n. sp.; *Anagroidea boweni* n. sp.; *Caenomymar howdeni* n. genus, n. sp.; *Notomymar masneri* n. sp.; *Ptilomymar magnificum* n. sp.; *Eustochus nearcticus* n. sp.; *Tanaomymar venezuelaensis* n. sp.; *Entrichopteris eberhardi* n. genus, n. sp.; *Masonana polynemoides* n. genus, n. sp.; *Restisoma howdeni* n. genus, n. sp.; *Tanyostethium elongatum* n. genus, n. sp.; *Acmopolynema helavai* n. sp.; *A. plaumanni* n. sp.; *A. pecki* n. sp.; *Platyfrons helavai* n. genus, n. sp.; and *Formicomymar venezuelaensis* n. genus, n. sp.

Seven species-groups of *Gonatocerus* Nees are recognized. These are the *deficiens*, *straeleni*, *ater*, *membraciphagus*, *sulphuripes*, *masneri* and *litoralis* groups. Four species-groups of *Acmopolynema* are also proposed. These are the *helavai*, *bifasciatipennis*, *pecki* and *plaumanni* groups. Key to the species-groups of both genera are given.

The following new generic synonymies are proposed: *Dicopulus* Ogloblin and *Chromodicopus* Ogloblin under *Dicopomorpha* Ogloblin; *Sphegilla* Debauche under *Camptoptera* Forester; *Stenomymar* Ogloblin under *Erdosiella* Soyka; *Eustephanodes* Ogloblin under *Stephanodes* Enock; *Xenopolynema* Ogloblin under *Polynema* Haliday.

The following new combinations are proposed: *Dicopomorpha pulchricornis* (Ogloblin) from *Chromodicopus* and *Dicopomorpha stamineus* (Ogloblin) from *Dicopulus*. *Polynema areolatum* (Ogloblin); *carbonelli* (Ogloblin); *luteolum* (Ogloblin); *orientalis* (Ogloblin); *pallidiventris* (Ogloblin); *polychromum* (Ogloblin); *reticulatum* (Ogloblin) and *succineum* (Ogloblin) from *Barypolynema*.

Camptoptera Foerster is divided into 2 subgenera: *Camptoptera* and *Macrocamptoptera* Girault and a key given to separate them.

Anaphes Foerster is divided into 3 subgenera; *Anaphes, Patasson* Walker and *Austranaphes* Ogloblin and keys are given to males and females of the subgenera.

Keys to females and males of the New World genera are provided and keys to subgenera are included under the respective

genera. For each genus a diagnosis, synonymy, distribution and list of known species from the New World are given. Nine described genera are recorded from the New World for the first time.

Six nominal genera are recorded from the New World for the first time.

Errata

p. 4,	line 30 after "relationship" continue line 31 without a break.
p. 12,	line 14, delete bracket, after vein.
p. 12,	line 15, after "or" apterous. *Cleruchus*.
p. 19,	line 24, change 22(20) to 22(21).
p. 25,	line 23, change 1911*a*: to 1911*d*:
p. 38,	line 13, add 130 after 71.
p. 39,	line 26, add *c* after 1916.
p. 46,	line 18, change 1916*a*: to 1916*c*.
p. 52,	line 31, add *a* after 1929.
p. 78,	line 1, insert after *bifasciatipennis: costaricense* Soyka, 1956: 18 (?).
p. 78,	line 8, delete *rufescens* Ashmead, 1904: 521 (?b).
p. 83,	line 8, change 1911*a* to 1911*g*:.
p.115,	after line 7 insert Gibson, G.A.P. 1986. Evidence for monophyly and relationships of Chalcidoidea, Mymaridae, and Mymarommatidae (Hymenoptera: Terebrantes). Can. Ent. 118: 205-240.
p.115,	line 18, change Colomba to Colombia.
p.125,	line 41, change hind coxae to hind coxa.
p.140,	no. 91, change *Omymymar* to *Omyomymar*.

CHAPTER 1

Introduction

Members of the family Mymaridae, or fairyflies, are found throughout the world. Individuals are minute, non-metallic chalcidoids ranging from 0.2 to 4.0 mm in length. All are parasitic on eggs of other insects. They are abundant in most terrestrial habitats and may be collected by various means, including sweep nets, suction traps (Yoshimoto, 1967), Malaise traps, wind sock traps (Gressitt and Yoshimoto, 1963) as well as pitfall and pan traps.

Ashmead (1904) gave the first comprehensive key to the mymarid genera of the world. Schmiedeknecht (1909) also gave a key to the genera of the world. Most recently, Annecke and Doutt (1961) revised world genera, recognizing 68 genera and subgenera. Regional keys to genera (or species) were given by Debauche (1948) for Belgium, Debauche (1949) for Africa, Hellen (1974) for Finland, Tryapitzin (1978) for the European part of USSR; Alayo and Hernandez (1978) for the Antilles, Peck, Boucek, and Hoffer (1964) for Czechoslovakia, Subba Rao and Hayat (1983, 1984) for the Orient, and Schauff (1984) for the Holarctic.

Huber (1986) reviewed the higher classification and biology of the family and listed important taxonomic references.

Methods and material

During my studies of the family I found that existing keys were inadequate to place specimens of many taxa to genera. Several did not appear to belong to previous described genera and are therefore proposed as new. Other taxa are reported for the first time in the New World. In order to place these taxa in context, a review of the previously described genera that occur in the New World is also given, together with a preliminary list to all the genera presently known from the region. The area reviewed includes North, Central and South America, the Carribean Islands and the islands off the coast of South America. Some genera are known from only one sex.

Thus, the females and the males are keyed separately; subgenera are keyed under their respective genera. Synonymy, a generic diagnosis, distribution, discussion, and a list of known species from the New World are included under each genus. A total of 59 genera and subgenera are recognized from the New World, of which 9 are considered new. The type species of new genera and species and species on which species-groups are based are described at the end of the text.

The Canadian National Collection of Insects provided the major portion of the study material. Most of the material was recently collected (1970-1983) by M. Alvarenga, F.D. Bennett, B. Bowen, J.M. Campbell, W. Eberhard, B. Finnamore, A. Forsyth, C. Garcia, G.A.P. Gibson, G. Gillespie, J.M. Heraty, G. Heinrich, J. Helava, H.F. Howden, J. Huber, L. Huggert, N.F. Johnson, M. Kaulbars, W.R.M. Mason, L. Masner, A. Newton, F.M. Oliveira, S.& J. Peck, L. Pena, F. Plaumann, V. Roth, M. Sharkey, A. Newton and M. Thayer.

I have had the opportunity to study the types of A.A. Girault from Australia (Queensland Museum, Brisbane, Australia) on loan to Dr. R.L. Doutt, University of California, Albany. During several visits to the British Museum (Natural History), London and the United States National Museum, Washington, D.C., I studied the mymarid types and identified species in their collections. Also studied were the types of A.A. Ogloblin from CNM, and the paratypes and identified mymarid specimens of H.R. Debauche from MRHN.

I have written several letters of inquiry to the Biology Department of the University of Chile, Santiago, Chile, regarding the types of *Oncomymar dipteron* Ogloblin, *Cremnomymar fernandezi* Ogloblin, *Scolopsopteron kuscheli* Ogloblin and *Nesopolynema caudatum* Ogloblin. I have received no response from this department as to the deposition of these types.

Both point-mounted and slide-mounted representatives of the different genera were studied. Critical-point dried specimens on points were studied with a stereomicroscope at 64 x and 160 x magnifications. Slide mounted specimens were examined under a compound microscope at 120 x and 200 x magnifications. The fore and hind wings and one antenna were sometimes dissected from a type specimen of new species and mounted on balsam slides for detailed study. Illustrations were taken using a scanning electron microscope when critical point dried specimens were available. Photographs of slide mounts and line drawings are also included.

The morphological terms used here largely follow Debauche (1948) and Schauff (1984). They are illustrated in figures 1-8.

Distribution of a genus is given for New World countries, and general extralimital distribution.

The types of all new species described in this paper are deposited in the Canadian National Collection of Insects and Arthropods, Biosystematics Research Centre, Ottawa, Canada. The following is a list of abbreviations (Arnett *et al*, 1986) used to designate the institutions where type-specimens are deposited:

BPBM Bernice P. Bishop Museum, Honolulu, Hawaii.
BMNH British Museum (Natural History) London, England.
CIZC Centro de Investigationes Zoologicas, Universidad de Chile, Santiago, Chile.
CNCI Canadian National Collection of Insects, Ottawa, Ontario, Canada.
HNHM Hungary Natural History Museum, Budapest, Hungary.
ISNB Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium.
MLPA Museo de La Plata, Argentina.
MNHN Muséum National d'Histoire naturelle, Paris, France.
MNMS Museo Nacional de Ciencias Naturales, Madrid, Spain. Museum of Victoria, Abbotsford, Victoria,Australia.
MZUF Museo Zoologico, "La Specola", Florence, Italy.
NMID National Museum of Ireland, Dublin, Ireland.
MHNG Museum d'Histoire Naturelle, Geneva, Switzerland.
NHMW Naturhistorisches Museum, Wein, Austria.
NHRS Naturhistoriska Riksmusset, Stockholm, Sweden.
NMPC National Museum (Natural History), Prague, Czechoslovakia.
OXUM Hope Entomological Museum, Oxford, England.
QMBA Queensland Museum, Brisbane, Australia.
RLDC Robert L. Doutt Private Collection, Santa Barbara, California.
USNM United States National Museum, Washington, D.C.
ZMUC Zoological Museum, University of Copenhagen, Denmark.

I did not see all of the primary types of the New World mymarid species and I have not attempted a phylogenetic analysis. However, I hope that the results of my study will inspire future chalcidologists to study this family.

CHAPTER 2

Systematics

The Placement of Mymaridae

The family Mymaridae was first treated as a tribe of Chalcididae by Haliday (1833), later elevated to family rank by him in 1839. Westwood (1840), Walker (1846), Foerster (1847, 1856) and Enock (1909) placed mymarids in the superfamily Proctotrupoidea. Dalla Torre (1898) pointed out that Haliday's views were correct in placing the family Mymaridae in the Chalcidoidea The reason for placing Mymaridae in the Proctotrupoidea was not given by the above authors. DeSantis (1967, 1971, 1979), Burks (1979) and Peck (1951,1963) placed Mymaridae with Chalcidoidea. Peck, Boucek and Hoffer (1964) pointed out that in overall pattern the Mymaridae fall within the Chalcidoidea, which they defined by the structure of the pronotum and the very reduced fore wing venation. Koenigsmann (1978) pointed out that all of the characters of Mymaridae either can be derived from the Chalcidoidea or else correspond with them.

Kozlov and Rasnitsyn (1979) considered mymarids to be derived from the same clade as the extinct Family Serphitidae and classified both in Proctotrupoidea. Rasnitsyn (1980) placed Mymaridae and Scelionidae within his new superfamily Diaprioidea. Rasnitsyn stated (translation from Rasnitsyn's, 1980 paper) that "some of the most important diagnostic characters of Mymaridae appear to be variable; their pronotum may or may not extend as far as the tegula, the postspiracular sclerite (= prepectus) may be present or absent, or it may look like a part of the mesopleuron separated by an incomplete groove. It may indeed be a secondary formation that is not homologous with the true postspiracular sclerite. The other characters of Mymaridae suggest contradictory conclusions regarding their relationships

and are for the most part equally unreliable. For example, the absence of ringlets (i.e. small segments at the base of the flagellum of the antenna) forms a link between Mymaridae and Diaprioidea, but the ringlets may also be lacking in the Chalcidoidea (such as

Chalcididae, Leucospidinae). On the other hand the incompletely closed apex of metasoma in the females and the more or less external positions of the ovipositor are characteristic of both Mymaridae and Chalcidoidea, but there is even a group of Diaprioidea (Serphitidae, particularly Mymarommatinae) among which the gaping apex of the metasoma and the external position of the ovipositor are fairly common features. This circumstance, combined with the major structural characters of the postspiracular sclerite in Mymaridae and with the multitude of their parallelism with Mymarommatinae, suggests that Mymaridae should be transferred to Diaprioidea and be placed close to Scelionidae and Serphitidae."

The family Mymaridae is considered to be monophyletic based on at least 3 apomorphies: fore wing with hypochaeta; head with frontal, median and supraorbital suture; and toruli distinctly closer to inner margin of eye than to each other. Chalcidoidea, including Mymaridae, is considered to be monophyletic based on at least 3 apomorphies: prepectus externally visible, at last dorsally adjacent to lateral edge of mesoscutum; mesothoracic spiracle positioned at exposed lateral edge of mesoscutum; and multiporous plate of antennal sensilla (Gibson, 1986). The family Mymarommatidae, once included in the Chalcidoidea, is considered to be the monophyletic sister group of Chalcidoidea based on several apomorphies. It is suggested that mymarommatids be accorded family status but that they not assigned to superfamily until phyletic relationships are more accurately determined in Terebrantes (Gibson, 1986).

A character state present in most species that has not been considered by other authors is the frenal groove. The scutellum consists of two parts, anterior and posterior, divided by a frenal groove (= transverse line) or a row of micro-punctures. The frenal grooves is present in some other chalcidoids but does not occur in the Proctotrupoidea.

The general characters of the Mymaridae were already established in the late Cretaceous Period [Yoshimoto (1975), Kozlov and Rasnitsyn (1979) and Rasnitsyn (1980)]. They are a distinct group isolated from all other Chalcidoidea (Yoshimoto, 1975). The morphological attributes of the Mymaridae include: 1) A series of sutures on the head. The lower part of the vertex is bounded by a strong and prominent "transverse suture" (= transverse trabecula of authors and median carina of Debauche, 1948) (Figs. 2, 3). The lateral margin of the vertex is bounded by the "supraorbital suture" (= supraorbital carina of Debauche). These sutures are folded along the margins of the head sclerites and may appear as carinae or striations (Ogloblin, 1959). The folded margins are often obscured from above. A pair of "frontal sutures" extending from the extremities of the transverse suture also run ventrally along the inner orbit of each eye. 2) Generally the toruli are situated closer to the inner eye orbit than to each other (Figs. 2, 110, 115). However, in the genera *Eubroncus* Yoshimoto, Kozlov and Tryapitzin *Stromarotum* Yoshimoto, Kozlov and Tryapitzin (1972), and *Anagroidea* Girault, the antennal toruli are on the projected frontal part of the face and closer to each other than to the eye orbit (Gibson, 1986). In other Chalcidoidea, the toruli are situated closer to each other than to the eye margin, except in some Pteromalidae (Schauff, 1984) and some eulophid males. 3) The mid basal part of the mandible possesses a horizontally elongate non-chitinous invagination where prominent muscles are attached (Fig. 149). 4) The presence of an hypochaeta on the fore wing (Schauff, 1984).

Family diagnosis

Body length generally 0.2 to 4.0 mm long; antenna usually inserted high on frons, near the transverse suture, usually long and slender, with or without radicula (basal constricted portion of scape) (Fig 7), without ring-like first funicular segment, clavate in female and filiform in male, club in female 1-3 segmented (Fig. 7); antennal toruli usually widely separated, closer to each inner eye orbit than to each other (Fig. 2), except in Eubroncinae (see discussion of placement of Mymaridae); female club with sensilla placoidea (Fig. 7); head with transverse and supraorbital sutures (Figs. 1, 2); mandible 1-4 dentate, occasionally teeth reduced or apparently absent, mid basal part of mandible broadly emarginate, with large visible muscle attachment, pronotum either entire or mediolongitudinally divided into halves, with or without an additional sclerite between the halves (Figs. 1, 3); "neck region" refers to cervical scerite of propleuron; mesothoracic spiracle (="pronotal" spiracle) either vestigial, sessile or stalked; prepectus usually distinct, present as independent sclerite except in *Ptilomymar* Annecke and Doutt; notauli usually present; scutellum often separated into two sections by a transverse suture (frenal groove) or by a row of micropunctures (Fig. 1); fore wing varied, but usually narrow at base and broad apically (Fig. 6), with venation reduced; hind wing usually with basal stalk, sometimes lacking a membrane; apterous forms, usually with scutum, anterior scutellum and posterior scutellum transverse or subrectangular in shape (Fig. 1); the wing vein Rs refers to the prolonged, tapering vein that originates from the ventral margin of the short marginal vein and extends toward the wing apex below the postmarginal vein. This unusual wing venation belongs to the tribe Cremnomymarini of Ogloblin (1952). Tarsi either 4 or 5-segmented (Fig. 8); metasoma broadly sessile, subsessile or petiolate; mesophragma strongly projected into metasoma (Fig. 8a), barely or not projected into post petiolar region of metasoma.

A world revision of the genera of Mymaridae is needed to determine correct subfamilial and tribal separation, so higher categories are not included here. A summary of the higher classification of the family is presented in Huber (1986).

Hosts

Mymarids are internal parasites of insect eggs. Many of the species are parasites of economically important insect pests. A detailed list of hosts is given in Huber (1986). Host data after Huber (1986) publication are included in the text.

CHAPTER 3

Key to the genera of Mymaridae of the New World

The sexes can be distinguished by the following couplet.

Antenna with 1-to 3-segmented club . . . . Females. Part I
Antenna without a club, filiform . . . . Males. Part II

Part I. Key to genera of female Mymaridae of the New World

1. Tarsi 5-segmented 2
- Tarsi 4-segmented 13

2.(1) Metasoma broadly sessile (Fig. 107); mesophragma plainly projecting into metasoma (Fig.8a) 3
- Metasoma constricted at base with petiole of varied length (Figs. 107, 112); mesophragma not projecting into metasoma 8

3.(2) Antennal funicle 5-segmented (Fig. 9); hind margin of fore wing excised beneath venation (Fig. 63) . . . . *Alaptus* Westwood, p. 23
- Antennal funicle 6-or 7-segmented (Figs. 10, 11, 13); hind margin of fore wing not excised beneath venation 4

4.(3) Antennal funicle 6-segmented (Fig. 11); head and mesosoma coarsely sculptured 5
- Antennal funicle 7-segmented (Figs. 10, 13); head and mesosoma not coarsely sculptured 6

5.(4) Mesoscutum with notauli; axilla strongly produced forward of anterior margin of scutellum; scutellum without punctures . . . . *Litus* Haliday, p. 24

- Mesoscutum without notauli; axilla not produced forward of anterior margin of scutellum; scutellum with small punctures . . . . *Neolitus* Ogloblin, p. 24

6.(4) Antennal scape with 2 or 3 setaceous teeth (Fig. 13) funicular segments 1 and 2 subequal in length (Fig. 13); mandible blade-like, projected downward and not overlapping . . . . *Dicopus* Enock, p. 25

- Antennal scape without setaceous teeth; funicular segment 1 much longer than 2, segment 2 ring-like (Fig. 10); mandibles bidentate, overlapping each other 7

7.(6) Fore wing narrow and elongate, anterior and posterior margins parallel with 3 rows of hairlines; occiput slightly emarginate medially (Fig. 107) . . . . *Callodicopus* Ogloblin, p. 26

- Fore wing elongately spatulate with 2 rows of hairlines: occiput forming an acute v-shaped emargination . . . . *Dicopomorpha* Ogloblin, p. 26

8.(2) Antennal funicle 4-or 5-segmented (Figs. 12, 16) 9

- Antennal funicle with 6 or more segments (Figs. 14, 15, 17, 18, 19) 10

9.(8) Fully winged, venation extended over 0.5 length of forewing (Fig. 60); ocelli present; stemmaticum quadrate; compound eye with 20 or more small ommatidia; occipital carina absent; pronotum, mesoscutum and scutellum not transverse . . . . *Arescon* Walker, p. 29

- Apterous (Fig. 109); ocelli absent (Fig. 109); stemmaticum absent; compound eye with 11-12 large ommatidia (Fig. 110); occipital carina present; pronotum, mesoscutum amd scutellum transverse, 2.5-3.0 x wider than long (Fig. 109) . . . . *Myrmecomymar* n. genus, p. 28

10.(8) Antennal funicular segment 2 ring-like, much shorter than segment 1 (Figs. 14, 15, 17) 11

- Antennal funicular segment 2 much longer than segment 1 (Figs. 18, 19, 20, 21) 12

11.(10) Propodeum with dorsal margin laminate and with X-shaped median carinae (Fig. 131); posterior scutellum with lateral margin striate (Fig. 131) . . *Hadromymar* n. genus, p. 30

- Propodeum without laminae and without median carina; posterior scutellum lateral margin not striate (Figs. 113, 114) . . . . *Camptoptera* Foerster, p. 32

12.(10) Propodeum with areolate pattern of carina (Figs. 117, 121); face without subantennal sutures (Fig. 120); pronotum with transverse carina . . . . *Ooctonus* Haliday, p. 35

- Propodeum without areolate pattern of carinae; face with subantennal sutures (Figs. 124, 127); pronotum without transverse carina . . . . *Gonatocerus* Nees, p. 36

13.(1) Antenna double geniculate (Fig. 24); mandible flattened, long, transverse and acutely triangular in frontal view, extended ventrally in same plane as occipital margin of head; fore wing paddle-shaped, apical margin rounded (Fig. 81) . . . . *Anagroidea* Girault, p. 42

- Antenna geniculate (Figs. 26, 29) mandible short, not extended ventrally in same plane as occipital margin of head; fore wing not as above 14

14.(13) Metasoma broadly sessile; mesophragma strongly projected into metasoma (Fig. 8a) 15

- Metasoma constricted at base, subsessile or petiolate with petiole of variable length (Figs. 145, 149, 150), mesophragma not or barely projected into post petiolar region of metasoma 18

15.(14) Antennal club 1-segmented (Fig. 28); scutellum consisting of 2 subtriangular paramedial plates . . . . *Anagrus* Haliday, p. 43

- Antennal club 2-or 3-segmented (Figs. 25, 26, 29); scutellum undivided (Fig. 108) 16

16.(15) Antennal club 3-segmented (Fig. 25) 17

- Antennal club 2-segmented (Fig. 29) . . . . *Omyomymar* Schauff, p. 48

17.(16) Posterior scutellum divided by longitudinal suture; ocelli on triangular stemmaticum; antennal club divided obliquely, at least for apical segment (Fig. 25) . . . . *Stethynium* Enock, p. 44

- Posterior scutellum entire, not divided by a longitudinal suture; ocelli without stemmaticum; antennal club not divided obliquely . . . . . . *Neostethynium* Ogloblin p. 45

18.(14) Metasoma subsessile (Figs. 145, 146, 150) 19
- Metasoma distinctly petiolate (Figs. 149, 164) 30

19.(18) Ovipositor enclosed by prominent hypopygium (Fig. 146) . . . . *Erythmelus* Enock, p. 45
- Ovipositor not enclosed by hypopygium (Fig. 158) . . 20

20.(19) Antennal club 2-or 3-segmented (Figs. 26, 33) 21
- Antennal club unsegmented (Figs. 30, 31) 25

21.(20) Antennal club 2-segmented (Fig. 33) 22
- Antennal club 3-segmented (Fig. 26) 24

22.(2l) Anterior and posterior margins of fore wing subparallel beyond venation . . . . *Cleruchus* Enock p. 55
- Fore wing elongately spatulate (Figs. 73, 74) 23

23.(22) Scutellum divided into anteriorly and posteriorly; posterior scutellum longitudinally divided medially; propodeum entire, without groove . . . . *Schizophagrama* Ogloblin p. 54
- Scutellum entire, undivided; propodeum divided medially by longitudinal groove . . . . *Anaphes* Haliday p. 50

24.(21) Base of ovipositor produced anteriorly beneath mesosoma; mesoscutum as long as broad (Fig. 134); macropterous . . . . *Idiocentrus* Gahan, p. 47
- Base of ovipositor not produced anteriorly beneath mesosoma; mesoscutum slightly broader than long; apterous . . . . *Notomymar* Doutt & Yoshimoto, p. 46

25.(20) Ovipositor 1.5-2.0 x length of metasoma 26
- Ovipositor shorter than metasoma 27

26.(25) Antennal scape including radicula with length 2.5 x width of head; radicula about 0.5 length of scape (Fig. 30); fore wing long, spatulate; marginal vein longer than submarginal (Fig. 83) . . . . *Australomymar* Girault, p. 48

- Antennal scape including radicula with length 0.7 width of head; radicula about 0.1 length of scape (Fig. 31); fore wing narrowly elongate, apex pointed; marginal vein shorter than submarginal (Fig. 84) . . . . *Caenomymar* n. genus, p. 49

27.(25) Posterior scutellum wider than long (Fig. 150); fore wing with normal pubescecence (Figs. 73,74) 28
- Posterior scutellum longer than wide; fore wing sparsely pubescencent (Fig. 75) 29

28.(27) Scutellum divided anteriorly and posteriorly; posterior scutellum longitudinally divided medially; propodeum entire, without groove . . . . *Schizophagma* Ogloblin, p. 83
- Scutellum entire; propodeum divided by longitudinal groove . . . . *Anaphes* Haliday, p. 52

29.(27) Fore wing with stigma distinct, not confluent with marginal vein); supraorbital suture divided into short segments; macropterous, brachypterous or apterous *Cleruchus* Enock, p. 55
- Fore wing with stigma confluent with marginal vein; supraorbital suture entire; macropterous . . . . *Eucleruchus* Ogloblin, p. 56

30.(18) Propodeum and base of metasoma with prodigious lateral carinae or laminae (Figs. 139, 140, 142) and branched setae (Figs. 141, 142) . *Ptilomymar* Annecke and Doutt, p. 57
- Propodeum and base of metasoma without lateral carinae or laminae, or branched setae 31

31.(30) Marginal vein of fore wing as long as submarginal or longer (Fig. 77) . . . . *Eustochus* Haliday, p. 57
- Marginal vein shorter than submarginal (Figs. 82,84) 32

32.(31) Body elongate, stick-like in appearance (Fig. 149); propodeum greatly prolonged, produced cylindrically posteriorad . . . . *Tanaomymar* Annecke and Doutt, p. 58
- Body not stick-like; propodeum not as above 33

33.(31) 1 or 2 apical segments of funicle large, flattened and club-like, (Figs. 38, 40); ovipositor about 0.33 length of metasoma (Figs. 161, 162) 34
- Apical funicular segments not large and flattened; ovipositor not prominent 35

34.(33) Apical 2 funicular segments club-like (Fig. 40); antennal torulus separated from transverse suture; disc of fore wing long, spatulate (Fig. 86) ...... *Erdosiella* Soyka, p. 61

- Apical funicular segment club-like (Fig. 38); antennnal torulus abutted against transverse suture; disc of fore wing ellipsoidal (Fig. 79) .... *Bruchomymar* Ogloblin, p. 59

35.(33) Scape elongate, about twice as long as width of head (Fig. 54); hind wing without membrane or marginal cilia .... *Mymar* Curtis, p. 59

- Scape elongate-ovate to ellipsoidal, not twice as long as width of head (Figs. 41, 42); hind wing with membrane and marginal cilia 36

36.(35) Fore wing broadly spatulate, disc with dense long hairs (Figs. 87, 88); pronotum with small mid-dorsal rectangular plate (Figs. 171, 173) or apex of fore wing ovately rounded with basal 0.25 length of wing narrow, stem-like (Fig. 87) 37

- Fore wing without above combinations of characters . 38

37.(36) Fore wing with marginal cilia as long as width of wing or longer; middle and apex of disc with dense bristle-like hairs on black bands (Fig. 87); propodeum with median carina; pronotum longitudinally divided by suture .... *Entrichopteris* n. genus, p. 99

- Fore wing with marginal cilia short, about 0.33 width of wing; disc pubescent with 2 brownish spots at apex and brownish band at base (Fig. 88); propodeum without median carina; pronotum divided mid-dorsally by small subrectangular plate (Figs. 171, 173) *Masonana* n. genus, p. 100

38.(36) Fore wing with long postmarginal vein or with distinct vein-like projection (= Rs) from ventral part of stigmal vein 39

- Fore wing without long postmarginal or Rs veins, or brachypterous 41

39.(38) Pronotum divided medially; median carinae of propodeum formed as broad Y, propodeal surface with fine reticulation; plicae tiny, indistinct .... *Nesopolynema* Ogloblin, p. 65

- Pronotum not divided medially; median carinae of propodeum not formed as Y, propodeal surface smooth plicae large and distinct 40

40.(39) Propodeum with median carinae formed as broad V-shape posteriorly; metapleural suture indistinct; frenal groove near scutellar setae .... *Cremnomymar* Ogloblin, p. 66

- Propodeum with undivided longitudinal median carina; metapleural suture distinct; frenal groove halfway between scutellar setae and apex of scutellum .... *Parapolynema* Fidalgo, p. 67

41.(38) Head, pronotum, mesoscutum and scutellum strongly reticulate (Figs. 152, 174, 176) 42

- Body not scupltured as above 43

42.(41) Marginal vein elongate (Fig. 92); pronotum not divided (Fig. 152); propodeum strongly reticulate with pair of longitudinal carinae extended to base of petiole; mesopleuron, metapleuron and coxae strongly reticulate (Fig. 153); inner eye margin diagonally converging toward mouth (Fig. 153) .... *Caraphractus* Walker, p. 104

- Marginal vein punctiform (Fig. 99); pronotum divided medially (Fig. 176); propodeum smooth, without median carina (Fig. 174); mesopleuron, metapleuron and coxae smooth (Fig. 175); inner eye margin straight (Fig.177) .... *Restisoma* n. genus, p. 104

43.(41) Fore wing stalked, usually with dark brown spots or markings (Fig. 85); mesothoracic spiracle stalked (Fig. 168) .... *Neomymar* Crawford, p. 91

- Fore wing not stalked, without dark brown spots; mesothoracic spiracle sessile 44

44.(43) Notauli extended to transscutal suture (Fig. 181); enlarged, blunt setae on axillae not extended to posterior margin of propodeum; propodeal setae widely separated, usually situated above metacoxa 45

- Notauli joined together posteriorly, not extended to transscutal suture; enlarged, blunt setae on axillae nearly extended to posterior margin of propodeum; propodeal setae close to each other in mid area of propodeum .... *Chaetomymar* Ogloblin, p. 70

45.(44) Antennal scape with distinct rasp-like appearance (Fig. 180); mesothoracic spiracle placed on line mesad between pronotum and mesoscutum; pronotum divided mesad by two longitudinal sutures; marginal vein short and thin . . . . *Stephanodes* Enock, p. 72

- Antennal scape without rasp-like scales (Figs. 46, 47, 51, 52) mesothoracic spiracle not as above; pronotum without two longitudinal sutures mesally; marginal vein thickened or long and narrow 46

46.(45) Metasoma with petiole short, as long as wide or slightly wider than long, and dorsally flattened; frenal groove entire . . . . *Kalopolynema* Ogloblin, p. 72

- Metasoma with petiole about 3 x longer than wide and usually subcylindrical; frenal groove usually represented by row of punctures (Figs. 181, 184) 47

47.(46) Pronotum as long as mesoscutum, subtriangular; basal 0.5 of fore wing bare except for 1 or 2 hair lines on anterior margin of disc (Fig. 101); superorbital suture diagonal, meeting occipital foramen posteriorly . . . . *Tanyostethium* n. genus, p. 74

- Pronotum shorter than mesoscutum, conical, broadly bell-shaped or subtriangular; entire fore wing pubescent; superobital suture absent 48

48.(47) Median area of propodeum elevated, tapered narrowly and extended beyond coxal flange; anterior margin of pronotum and mesoscutum convex . . . *Polynemula* Ogloblin, p. 67

- Median area of propodeum not elevated, not extended beyond coxal flange; anterior margin of pronotum broadly concave and anterior margin of mesoscutum broadly convex 49

49.(48) Pronotum entire, broadly bell-shaped; vertex and occipital regions broadly concave, subrectangular and without occipital carina . . . . *Cnecomymar* Ogloblin, p. 71

- Pronotum divided medially; vertex and occipital regions not broadly concave, rectangular and with posterior transverse carinae 50

50.(49) Venation greatly reduced, marginal and stigmal veins confluent; propodeum with or without median carina (Fig. 184), or with 2 paramedial carinae (Fig. 181) 51

- Venation developed, marginal and stigmal veins separated; propodeum with V-shaped median carinae .... *Acmopolynema* Ogloblin, p. 75

51.(50) Head and pronotum densely covered with stout, blunt, spine-like setae (Figs. 184, 185); propodeum with (Fig. 184) or without median carina .... *Polynema* Haliday, p. 81

- Head and pronotum without stout, blunt, spine-like setae (Fig. 189); propodeum with 2 or more paramedial carinae (Figs. 181, 191) 52

52.(51) Frons and face flattened, smooth, without longitudinal trough (Fig. 183); head not broader than mesosoma (Fig. 181); tergum 2 about 0.7 length of metasoma; (Fig. 181) macropterous .... *Platyfrons* n. genus, p. 79

- Frons and face concave medially, with longitudinal trough running along inner margin of torulus to clypeal margin; head broader than mesosoma (Fig. 189); tergum 2 about 0.5 length of metasoma (Fig. 189); brachypterous (Fig. 96) .... *Formicomymar* n. genus, p. 80

Part II. Key to the genera of male Mymaridae of the New World

1. Tarsi 5-segmented 2

- Tarsi 4-segmented 11

2.(1) Metasoma broadly sessile (Fig. 107); mesophragma strongly projected into metasoma (Fig. 8a) 3

- Metasoma constricted at base (Figs. 107, 112) with petiole of varied length, mesophragma not or barely projected into gaster 7

3.(2) Hind margin of fore wing excised beneath venation (Fig. 63) .... *Alaptus* Westwood, p. 23

- Hind margin of fore wing not excised beneath venation 4

4.(3) Antennal funicular segment 2 anelliform or segments 2-3 subequal in length; scape without setaceous teeth . . . 5

- Antennal funicular segment 2 about half length of 3 but not anelliform; scape with 2 or 3 setaceous teeth . . . . *Dicopus* Enock, p. 25

5.(4) Occiput not carinate; antennae inserted at transverse suture; anterior margin of fore wing without long ciliae . . . . *Litus* Haliday p. 24

- Occiput carinate; antennae inserted far below transverse suture; anterior margin of fore wing ciliate 6

6.(5) Fore wing narrow and elongate, anterior and posterior margins parallel with 3 rows of hairlines; occiput slightly emarginate medially . . . . . *Callidicopus* Ogloblin, p. 26

- Fore wing elongately spatulate with 2 rows of hairlines; occiput forming a broad V-shaped emargination . . . . *Dicopomorpha* Ogloblin, p. 26

7.(2) Marginal vein of fore wing very long, 2.6 x longer than subcosta (Fig. 60) 8

- Marginal vein of fore wing short, 0.5 length of subcosta or subequal in length (Figs. 66, 67, 72) 9

8.(7) Mandible tridentate; ocellar stemmaticum absent or not well defined; fore wing with one distal macrochaeta . . . . *Myrmecomymar* n. genus, p. 28

- Mandible quadridentate; ocellar stemmaticum distinct; fore wing with 2 distal macrochaetae . *Arescon* Walker, p. 29

9.(7) Propodeum with areolate pattern (Figs. 117, 121); pronotum with transverse carina . . . . . . *Ooctonus* Haliday, p. 36

- Propodeum without areolate pattern (Figs. 122, 125, 130), pronotum without transverse carina 10

10.(9) Subantennal sutures widely separated at anterior margin of clypeus or indistinct; funicular segment 2 short, anelliform . . . . *Camptoptera* Foerster, p. 32

- Subantennal sutures joined or nearly approximate at anterior margin of clypeus (Figs. 124, 127); funicular segment 2 long, not anelliform *Gonatocerus* Nees, p. 36

11.(1) Metasoma broadly sessile (Fig. 107); mesophragma strongly projected into metasoma (Fig. 8a) 12
- Metasoma constricted at base, subsessile or petiolate with petiole of variable length (Figs. 145, 149, 150); mesophragma not or barely projected into gaster 14

12.(1) Posterior scutellum divided by longitudinal deep groove; axilla produced forward of anterior margin of scutellum; funicular segment 1 shorter than pedicel . . . . *Anagrus* Haliday, p. 43
- Posterior scutellum undivided (Fig. 108); axilla not produced forward of anterior margin of scutellum; funicular segment 1 same length or longer than pedicel 13

13.(12) Fore wing subparallel-sided (Fig. 91); conical sensillae present on scape (Fig. 57); pronotum visible dorsally; ocelli not on triangular stemmaticum *Omyomymar* Schauff, p. 48
- Fore wing elongate-spatulate (Fig. 89); conical sensillae absent on scape; pronotum not visible dorsally, ocelli on triangular stemmaticum . . . . . *Stethynium* Enock, p. 44

14.(11) Metasoma subsessile (Figs. 145, 146, 150) 15
- Metasoma distinctly petiolate, petiole longer than wide (Figs. 149, 165, 167) 21

15.(14) Apterous; antenna 11-segmented; posterior scutellum rectangular, 3 x wider than long . . . . *Notomymar* Doutt and Yoshimoto, p. 46
- Macropterous; antenna 12 to 13-segmented; posterior scutellum cordate to subovate slightly broader than long16

16.(15) Metanotum projected over propodeum; mandibles reduced, not able to overlap; genitalia exserted nearly length of metasoma . . . . *Erythmelus* Enock, p. 45
- Metanotum not projected over propodeum; mandibles well developed, able to overlap; genitalia not exserted length of metasoma 17

17.(16) Metasomal tergum 2 emarginate on anterior margin (Fig. 150); propodeum with median longitudinal groove . . . . *Anaphes* Haliday, p. 50
- Metasomal tergum 2 straight on anterior margin; propodeum without median longitudinal groove 18

18.(17) Gena and occiput rounded; venation extending 0.5 length of fore wing (Fig. 83) ..... *Australomymar* Girault, p. 48
- Gena and occipital area angulate; venation extending 0.2 to 0.3 length of fore wing (Fig. 75) 19

19.(18) Posterior scutellum with longitudinal groove medially; anterior scutellum 2 x as wide as long .... *Schizophragma* Ogloblin p. 54
- Posterior scutellum entire, without longitudinal groove; anterior scutellum narrow, transverse, about 3 x as wide as long 20

20.(19) Supraorbital suture repeatedly interrupted; propodeum with 2 spiracular setae .... *Cleruchus* Enock, p. 55
- Supraorbital suture entire; propodeum without spiracular setae .... *Eucleruchus* Ogloblin, p. 56

21.(14) Fore wing paddle-shaped, rounded at apical margin (Fig. 81); mandible long, transverse and acutely triangular in frontal view, with sharp pointed tooth, extended ventrally in same plane as occipital margin of head .... *Anagroidea* Girault, p. 42
- Fore wing elongately spatulate to long and narrow; mandible short, not transverse and acutely triangular, and not extended ventrally in same plane as occipital margin of head 22

22.(20) Propodeum and base of metasoma with prodigious lateral carinae or laminae (Fig. 142) .... *Ptilomymar* Annecke and Doutt, p. 57
- Propodeum and base of metasoma without prodigious lateral carinae or laminae 23

23.(22) Body elongate, stick-like in appearance; (Fig. 149) propodeum greatly prolonged, produced cylindrically posteriad .... *Tanaomymar* Annecke and Doutt, p. 58
- Body not stick-like in appearance; propodeum not as above 24

24.(23) Antenna 11-segmented ..... *Eustochus* Haliday, p. 57
- Antenna 12-to 13-segmented 25

25.(24) Antennal scape elongate, about twice as long as width of head; fore wing stalked stalk about 0.67 length of wing (Fig. 80); hind wing without membrane or marginal cilia . . . . *Mymar* Curtis, p. 59

- Antennal scape elongate-ovate to ellipsoidal, not twice as long as width of head; fore wing not stalked, or stalk less than 0.67 length of wing; hind wing with membrane and marginal cilia 26

26.(25) Fore wing broadly spatulate disc densely hairy (Fig. 88); pronotum with small mid-dorsal rectangular plate (Fig. 171), or apex of fore wing ovately rounded with basal 0.25 length of wing narrow, stem-like (Fig. 88) . . . . *Masonana* n. genus. p. 63

- Fore wing without above combination of characters, or brachypterous, pronotum entire 27

27.(26) Fore wing with long postmarginal vein, or with distinct vein-like projection (= Rs) from stigmal portion . . . 28

- Fore wing without long postmarginal or Rs veins, or brachypterous 31

28.(27) Scutellum 1.5 x longer than wide, frenal groove distinct; mesoscutum without notaulus, short and small, about 0.1 of scutellum; ocelli absent . . . *Oncomyar* Oglobin, p. 64

- Scutellum as long as wide or wider than long, frenal groove with row of punctures; mesoscutum with notauli, usually as long as scutellum or slightly shorter; ocelli present . 29

29.(28) Fore wing narrow, parallel-sided, apex pointed; hind wing narrow, parallel-sided and short; disc of fore wing with normal pubescence . . . . *Scolopsopteron* Ogloblin, p. 65

- Fore wing spatulate; hind wings elongate ovate, not as above; disc sparsely pubescent 30

30.(39) Propodeum with median carina of propodeum formed as broad V-shape posteriorly; metapleural suture indistinct; frenal groove near scutellar setae . . . . *Cremnomymar* Ogloblin, p. 66

- Propodeum with median carina undivided; metapleural suture distinct; frenal groove halfway between scutellar setae and apex of scutellum . . . . *Parapolynema* Fidalgo, p. 67

31.(27) Head, pronotum, mesoscutum and scutellum strongly reticulate (Figs. 152, 174, 176) 32
- Body not sculptured as above 33

32.(31) Propodeum strongly reticulate with pair of longitudinal carinae extended to base of petiole; mesopleuron, metapleuron and coxae strongly reticulate (Fig. 152); inner eye margin converging ventrally (Fig. 153) . . . . *Caraphractus* Walker, p. 70
- Propodeum smooth without median carina (Fig. 175); meso- and metapleura and coxae smooth (Fig. 174); inner eye margin straight (Fig. 177) . . *Restisoma* n. genus, p. 68

33.(31) Fore wing stalked, with (Fig. 85) or without dark brown spots; mesothoracic spiracle stalked (Fig. 168) . . . . *Neomymar* Crawford, p. 60
- Fore wing not stalked, without dark brown spot(s); mesothoracic spiracle sessile 34

34.(33) Pronotum broadly bell shaped, entire; notauli narrowly grooved (Fig. 155) . . . . *Cnecomymar* Ogloblin, p. 71
- Pronotum not broadly bell shaped, divided medially or entire; notauli broadly grooved (Fig. 178) 35

35.(34) Scutellum with median longitudinal groove; antenna inserted on shelf-like structure or mantle (Fig. 179) . . . . *Tetrapolynema* Ogloblin, p. 68
- Scutellum without median longitudinal groove; antenna not inserted on shelf-like structure or mantle 36

36.(35) Mesothoracic spiracle placed mesad on line between pronotum and mesoscutum; marginal vein short and thin . . . . *Stephanodes* Enock, p. 72
- Mesothoracic spiracle not as above; marginal vein thickened or long and narrow 37

37.(36) Metasoma with petiole short, wider than long, dorsal surface flattened; frenal groove deep, distinct . . . . *Platypolynema* Ogloblin, p. 73
- Metasoma with petiole about 3-4 x longer than wide, dorsal surface concave; frenal groove faint or represented by row of punctures (Figs. 161, 181, 184) 38

38.(37) Pronotum acutely subtriangular in dorsal view, lateral margin carinate; fore wing bare except for 3-5 distinct, widely separated hair lines (Figs. 86, 101) 39

- Pronotum broadly subtriangular in dorsal view, lateral margin rounded; fore wing pubescent 40

39.(38) Pronotum with median longitudinal suture; median carina of propodeum faint or absent, without longitudinal depression; scutellum concave, laterally carinate . . . . *Erdosiella* Soyka, p. 61

- Pronotum without median longitudinal suture; median carina of propodeum distinct, with longitudinal depression; scutellum more or less flattened, laterally rounded . . . . *Tanyostethium* n. genus, p. 74

40.(38) Hind tibia with 4 (2 dorsal and 2 ventral) longitudinal rows of short bristles; venation developed, marginal and stigmal veins separated; propodeum with V-shaped carina . . . . *Acmopolynema* Ogloblin, p. 75

- Hind tibia without 4 longitudinal rows of short bristles; venation reduced, marginal and stigmal veins confluent; propodeum with or without median carina (Fig. 184) or with 2 paramedial carinae (Fig. 181) 41

41.(40) Antenna with distinct radicula (Fig. 53); propodeum with or without median carina (Fig. 184) *Polynema* Haliday, p. 81

- Antenna without distinct radicula; propodeum with 2 paramedial carinae (Fig. 181) *Platyfrons* n. genus, p. 79

CHAPTER 4

The Genera

Genus *Alaptus* Westwood

(Figs. 8a, 9, 63)

Alaptus Westwood, 1839: 79.
Type-species: *Alaptus minimus* Westwood. Monobasic. Deposited in NMID. (not examined).
Parvulinus Mercet, 1912: 331.
Type-species: *Parvulinus auranti* Mercet. Monobasic. Deposited in MNMS. (not examined).
Metalaptus Malenotti, 1917: 339.
Type-species: *Metalaptus torquatus* Malenotti. Monobasic. Deposited in NHMW. (not examined).

Distribution: Worldwide.

Diagnosis: Five-segmented tarsi; metasoma sessile; mesophragma highly developed and extended deeply into metasoma (Fig. 8a); female funicle 5-segmented; club 1-segmented; male flagellum 8-segmented; posterior scutellum highly developed and slightly sclerotized in form of transverse band; posterior margin of fore wing deeply incised (beyond level of venation) (Fig. 63).

Important references: Annecke and Doutt (1961); Schauff (1984).

List of species from the New World:
auranti (Mercet), 1912: 333.
borinquensis Dozier, 1932: 90.
caecilii Girault, 1908*b*: 189.
eriococci Girault, 1908*b*: 191.
globosicornis Girault, 1908*b*: 188.
iceryae Riley, 1889: 86.
minutus Dozier, 1932: 89.

intonsipennis Girault, 1910: 244.
psocidivorus Gahan, 1927: 180.
pygidialis Ogloblin, 1959*b*: 44.

Genus *Litus* Haliday

(Figs. 11, 58)

Litus Haliday, 1833: 345.
Type species: *Litus cynipseus* Haliday. Monobasic. Lectotype designated by Graham, 1982. Deposited in NMID. (not examined).

Distribution: Worldwide.

Diagnosis: Five-segmented tarsi; metasoma sessile; mesophragma projected into metasoma; head and mesosoma rugose-reticulate; female funicle 6-segmented (Fig. 11), with large ellipsoidal club; male flagellum 9-segmented; mandibles unidentate; notauli present; fore wing elongate with subparallel margins, long marginal vein and long marginal setae (Fig. 58).

Important references: Debauche (1948); Graham (1982).

Discussion: The male of *Litus cynipseus* Haliday was described by Viggiani (1973*a*). The males are very rare.

List of species from the New World:
maculipennis Ashmead, 1900: 265.
missionicus Ogloblin, 1955*c*: 495.
neotropicus Ogloblin, 1955*c*: 492.

Genus *Neolitus* Ogloblin

Neolitus Ogloblin, 1935*a*: 60.
Type species: *Neolitus argentinus* Ogloblin. Monobasic. Deposited in MLPA. (examined).
Neolitiscus Ghesquiere, 1946: 367. Unnecessary new name.
Lithisca Ogloblin, 1955*c*: 498. *Lapsus* for *Neolitiscus*, unnecessary new name.

Distribution: Argentina.

Diagnosis: Five-segmented tarsi; metasoma sessile; mesophragma projected into metasoma; head and mesosoma reticulate; female funicle 6-segmented; notauli absent; fore wing with parallel margins with long marginal setae; posterior scutellum with small punctures antero-medially.

Important reference: Ogloblin (1935*a*).

Discussion: Male unknown.

List of species from the New World:
Neolitus argentinus Ogloblin, 1935*a*: 59.

Genus *Dicopus* Enock

(Figs. 13, 59)

Dicopus Enock, 1909: 449.
Type species: *Dicopus minutissima* Enock. Monobasic. Deposited in BMNH. (examined).
Distribution: Worldwide.

Diagnosis: Five-segmented tarsi; metasoma sessile; mesophragma projected into metasoma; female funicle 7-segmented (Fig. 13); male flagellum 10-segmented; scape with 2 or 3 setaceous teeth; mandible blade-like, unidentate, projected ventrad from head.

Important references: Enock (1909); Annecke and Doutt (1961).

List of species known from the New World:
halitus Girault, 1911*a*: 347.
citri Mercet, 1912: 335.
enocki Doutt, 1974: 167.
pygmaeus Doutt, 1974: 166.

Genus *Callodicopus* Ogloblin

(Figs. 10, 65, 105, 107)

Callodicopus Ogloblin, 1955*a*: 377.
Type-species: *Callodicopus crassula* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Argentina, Brazil.

Diagnosis: Five-segmented tarsi; metasoma sessile; mesophragma projected into metasoma; female funicle 7-segmented; 2nd funicular segment of female ring-like; funicle segment 1 longer than segment 3; funicle segments 3 to 7 in female as long as broad (Fig. 10); male flagellum 11-segmented; occiput margined, slightly emarginate medially (Fig. 107); lateral margins of vertex divergent toward mouth; posterior margin of posterior scutellum broadly rounded; post petiolar region of metasoma ovate, longer than mesosoma, apex obtuse; fore wing narrow and elongate, anterior and posterior margins parallel with 3 rows of hair lines.

Important reference: Ogloblin (1955*a*).

Discussion: *Callodicopus* is related to *Dicopomorpha* Ogloblin but differs in having the funicle segments 3 to 7 in female as long as broad, the occiput slightly emarginate medially, the post petiolar region of metasoma longer than mesosoma, the apex obtuse and the fore wing narrow and elongate, anterior and posterior margins parallel, with 3 rows of hair lines.

Six female specimens of *Callodicopus crassula* Ogloblin on slides from Nova Teutonia, Brazil, are in the CNC.

List of species from the New World:
crassula Ogloblin, 1955*a*: 378.
cursor Ogloblin, 1955*a*: 384.
longicornis Ogloblin, 1955*a*: 381.
silvestriana Ogloblin, 1955*a*. 33: 383.

Genus *Dicopomorpha* Ogloblin

Dicopomorpha Ogloblin, 1955*a*. 33: 387.

Type-species: *Dicopomorpha macrocephala* Ogloblin. By original designation. Deposited in MLPA. (examined).

Chromodicopus Ogloblin, 1955*a*. 33: 390. *N. Syn.*

Type-species: *Chromodicopus pulchricornis* Ogloblin. By original designation. Deposited in MLPA. (examined).

Dicopulus Ogloblin, 1955*a*. 33: 377. *N. Syn.*

Type-species: *Dicopulus stramineus* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Argentina.

Diagnosis: Tarsi 5-segmented; metasoma sessile; mesophragma projected into metasoma; female funicle 7-segmented; 2nd funicular segment of female ring-like; funicle segment 1 shorter or subequal to segment 3; funicle segments 3-7 longer than broad; male flagellum ll-segmented; occiput margined with an acute V-shaped emargination; lateral margins of vertex parallel; post petiolar region of metasoma ovate, shorter than mesosoma, apex acuminate; fore wing elongately spatulate with 2 rows of hair lines.

Important reference: Ogloblin (1955*a*).

Discussion: All three of Ogloblin's nominal genera, *Dicopomorpha*, *Chromodicopus* and *Dicopulus*, belong to a single common genus. The characters of females and male of the above 3 nominal genera of Ogloblin (1955*a*) are congeneric. I am synonymizing two of the above genera under the genus *Dicopomorpha* Ogloblin based on the following characters: the vertex of head with lateral margins parallel, the occipital margin with an acute V-shaped emargination, the post petiolar region of metasoma shorter than mesosoma with apex acuminate and the fore wing elongately spatulate with 2 rows of hair lines.

List of species from the New World:

macrocephala Ogloblin, 1955*a*: 387.

pulchricornis (Ogloblin), 1955*a*: 390 *N. Comb.*

stamineus (Ogloblin), 1955*a*: 394. *N. Comb.*

Myrmecomymar n. genus

(Figs. 16, 109-111)

Description: Head in dorsal view about as long as wide or slightly broader than long (Fig. 109); occipital suture thin; occiput concave; compound eyes bare, small, rounded, with 10 to 11 large ommatidia in female (Fig. 110, 111), 55-60 tiny ommatidia in male; female antennae inserted slightly above level of ventral margin of eye, 7- 8-segmented (fig. 16) female funicle 4-segmented (Fig. 16) (North America) or 5-segmented (1 or segments 31-2 ring-like) (South America); radicula 0.33 length of scape; pedicel slightly longer than basal two funicular segments combined; club 1-segmented, ellipsoidal (Fig. 16); male flagellum filiform, 11-segmented; mandibles tridentate, apices not meeting in middle, left mandible evenly toothed, right mandible with middle tooth largest, top and bottom teeth small; clypeus broadly semi-ovate anteriorly, posterior area forming broad shelf-like structure which extends forward (Fig. 111); subantennal suture extending from base of toruli to basal lateral margin of oral cavity; antenna inserted below transverse suture (Fig. 111); malar space about 1.7 height of eye in female; 0.5 height of eye in male; malar groove absent in female; present in male; ocelli and stemmaticum absent.

Female mesosoma taller than long in lateral view; pronotum, mesoscutum and scutellum flattened dorsally, short and transverse (Fig. 109); "neck region" or cervical sclerite of propleuron hidden by vertex and occiput in dorsal view; pronotum subtriangular in male; notauli faint, greatly divergent apically in female, slightly divergent apically in male; mesothoracic spiracle stalked, situated at lateral posterior corner of pronotum; scutellum and postscutellum elongate, elevated, convex, slightly longer than wide; apex of posterior scutellum broadly rounded; metapleuron extremely narrow longitudinally, posterior margin carinate; propodeum sloping vertically in lateral view; longer than wide; propodeum somewhat concave, with short nucha produced posteriorly in female; smooth and finely reticulate in male. Legs long and slim; tarsi 5-segmented; hind coxa elongately ovate. Females apterous; males fully winged; wings lanceolate, longer than length of body; marginal vein nearly reaching 0.66 length of fore wing; venation with only distal macrochaeta; apical marginal cilia longer than width of wing.

Petiole longer than wide, slightly narrowed anteriorly with thin longitudinal carinae dorso-medially at lateral margins; female post petiolar region of metasoma large, slightly shorter than head and mesosoma combined (30:25), as high as long, slightly compressed laterally and rounded dorsally (Figs. 109, 110); metasomal terga 2 plus 3 partially fused, as long as combined length of metasomal terga 4-7; ovipositor coiled internally at base of metasomal tergum, extending ventrally and exserting slightly at apex; male post petiolar region of metasoma small, shorter than mesosoma (30:50); metasomal terga 2 plus 3, slightly shorter than metasomal terga 4-7.

Type-species: *Myrmecomymar masneri* n. sp. present designation.

Distribution: Canada, Ecuador, Mexico, Trinidad, Venezuela, United States.

Diagnosis: This genus is distinguished from *Arescon* Walker by having the following combination of characters. In the female: mandible tridentate; ocelli and stemmaticum absent (Fig. 110); pronotum, mesoscutum and scutellum short and transverse, relative length in ratio 5:9:7 (Fig. 109); notauli greatly divergent anteriorly; propodeum sloping vertically in lateral view; propodeum with many small denticles (Figs. 109, 110); female post petiolar region of metasoma ovate, laterally compressed (Figs. 109, 110). In the male, ocelli without well defined stemmaticum; venation with only distal macrochaeta; pronotum subtriangular; notauli slightly divergent apically; scutellum and posterior scutellum elongate, elevated, convex, slightly longer than wide; posterior scutellum broadly rounded at apex; petiole longer than wide.

Discussion: The word *myrmeco* refers to the ant-like appearance of females of this genus. The gender of *Myrmecomymar* is neuter. This genus extends from Canada to South America with several undescribed Neotropical species in CNC.

Genus *Arescon* Walker

(Figs. 12, 60)

Arescon Walker, 1846: 49.

Type-species: *Mymar dimidiatus* Curtis. Monobasic. Deposited in NMID. (not examined).

Leimacis Foerster, 1847: 208.

Type-species: *Leimacis rufula* Foerster. Monobasic. Deposited in NHMW. (not examined).

Limacis Foerster, 1856: 116. Unjustified emendation.
Xenomymar Crawford, 1913: 343.
Type-species: *Xenomymar urichi* Crawford. By original designation. Deposited in USNM. (examined).
Neurotes Enock, 1914: CXXXIV.
Type-species: *Neurotes iridescens* Enock. Monobasic. Deposited in BMNH. (examined).

Distribution: Canada, Europe, Ecuador, Panama, Trinidad, United States.

Diagnosis: Five-segmented tarsi; metasoma petiolate; female funicle 5-segmented (Fig. 12); marginal vein reaching beyond 0.5 length of wing (Fig. 60); ocelli on quadrate stemmaticum.

Important references: Annecke and Doutt (1961); Ogloblin (1957b); Schauff (1984).

List of species from the New World.
dallasi (Ogloblin), 1938*b*: 97.
elongatus (Ogloblin), 1957*b*: 37.
maculipennis (Ogloblin), 1957*b*: 37.
platensis (Ogloblin), 1957*b*: 42.
pusillus (Ogloblin), 1957*b*: 40.
urichi (Crawford), 1913: 349.

Hadromymar n. genus

(Figs. 17, 61, 131)

Description: Head in dorsal view transverse; vertex slightly concave; occiput deeply concave, sharply margined; compound eye large, semi-spherical, bare, tiny ommatidia bordered by carinae; female antennae inserted slightly above ventral margin of eye, funicle 6-segmented, scape narrow, elongate, extending beyond vertex, as long as width of head; pedicel subovate, distally subtruncate, as long as funicular segment 1; 2nd funicular segment ring-like; club lanceolate, 1-segmented; malar space 0.33 length of head; malar groove present; ocelli forming acute triangle, posterior ocelli touching occipital margin; mandible bidentate, apices meeting in middle; middle of face gradually swollen before toruli, ventral margin forming broad V-shape, concave; anterior margin of clypeus straight, deeply seated inward, with narrow space between clypeal margin and dorsal margin of mandible; lower margin of face and malar space angulate; subantennal suture absent; stemmaticum absent.

Mesosoma stout, higher than wide, in lateral view; "neck region" or cervical sclerite of propleuron partially hidden by pronotum and head; pronotum narrow, subrectangular in dorsal view; mesoscutum and scutellum smooth, convex; notauli complete, finely grooved; lateral margin of mesoscutal lobe with single spine-like seta; pair of spine-like setae near hind margin of mesoscutal lobe; posterior scutellum smooth with lateral area finely striate (Fig. 131), longer than wide, concave dorsally, dorsal apical margin rounded; epimeral and episternal sutures obliterated, fused to form single large mesopleuron; carinae of propodeum in form of "X", dorsal margins of each carina with short laminae; anterior lateral margin of propodeum with broad, fine reticulation (Fig. 131); tiny, narrow, slit-like opening of propodeal spiracle adjacent to anterior margin; propodeal margin with short nucha; tarsi 5-segmented; fore coxa large, triangular, apex extending upward, outer surface flattened with ring-like carina; fore wing similar to *Camptoptera* (Fig. 61).

Petiole short, slightly longer than wide, with pair of dorsal and lateral longitudinal carinae (Fig. 131); anterior margin of post petiolar region of metasoma sloping steeply forward, margin straight, lateral margins parallel, apex acuminate; metasomal tergum 2 covering entire post petiolar region of metasoma except tergum 3 slightly exposed posteriorly; posterior margin of metasomal tergum 3 straight.

Type-species: *Hadromymar masoni* n. sp. Present designation.

Distribution: Costa Rica, Ecuador, Panama.

Diagnosis: *Hadromymar* is related to *Camptoptera* Foerster but differs from the latter in having the following characters: posterior margin of metasomal tergum 3 forming a straight line; propodeum with X-shaped median carinae with laminae on dorsal margin (Fig. 131); metasomal tergum 2 nearly covering entire post petiolar region of metasoma.

Discussion: The word *hadros* means stout or bulky; this refers to the general habitus of the wasp. The gender of *Hadromymar* is neuter.

The male is unknown.

List of species from the New World:
masoni n.sp.

Genus *Camptoptera* Foerster

(Figs. 14, 15, 62, 64, 112-116)

Camptoptera Foerster, 1856: 116.
Type-species: *Camptoptera papaveris* Foerster. Monobasic. Deposited in NMID. (not examined).
Stichothrix Foerster, 1856: 117, 188, 122.
Type-species: *Stichothrix cardui* Foerster. Monobasic. Deposited in NHMW. (not examined).
Pteroclisis Foerster, 1856: 144.
Type-species: *Camptoptera papaveris* Foerster. Monobasic. Deposited in NHMW. (not examined).
Macrocamptoptera Girault, 1910: 239.
Type-species: *Camptoptera metotarsa* Girault. By original designation. Deposited in USNM. (Examined).
Congolia Ghesquiere, 1942: 320.
Type-species: *Congolia sycophila* Ghesquiere. Monobasic. Deposited in ISMB. (not examined).
Sphegilla Debauche, 1948. 108: 62-65. N. Syn.
Type-species: *Sphegilla franciscae* Debauche. By original designation. Deposited in ISMB. (examined).
602 *Camptoptera* (*Zemicamptoptera*) Ogloblin and Annecke, 1961. 24:
Type-species: *Camptoptera* (*Zemicamptoptera*) *semialbata* Ogloblin and Annecke. By original designation. Deposited in MLPA. (examined).
Herulia Hedqvist, 1962. 27: 103.
Type-species: *Herulia sundholmi* Hedqvist. By original designation. Deposited in NHRS. (not examined).

Diagnosis: Five-segmented tarsi; metasoma petiolate (Fig. 114); mesophragma extended beyond hind coxa; female funicle 7-segmented, 2nd funicular segment ring-like (Figs. 14, 15); male flagellum 9-segmented; apical fore wing recurved (Fig. 62); occiput margined; axillae advanced into lateral lobe of mesoscutum (Figs. 112, 113).

Distribution: Worldwide.

Important references: Debauche (1948); Annecke and Doutt (1961); Hedqvist (1962).

Discussion: The types of *Sphegilla franciscae* Debauche and *Camptoptera papaveris* Foerster (determined by Debauche) were compared. I found a definite anelliform funicle of the 2nd segment in *Sphegilla franciscae* under the high magnification of a stereoscope microscope. In addition to the antenna, the fore wing venation of both species show no remarkable differences in size or setal arrangement. The length-width ratio of mesoscutum, scutellum, posterior scutellum and propodeum are similar in both females and a short metasomal petiole is visible under the compound steroscope. The post petiolar region of metasoma of *C. papaveris* is slightly more compact than *S. franciscae*. I concluded that both species are congeneric and I am synonymizing *Sphegilla* Debauche with *Camptoptera* Foerster.

Ogloblin and Annecke (1961) erected a new subgenus *Zemicamptoptera* based on the reduction of a single funicle segment in the male. I consider this to represent at most a species group in *Camptoptera*.

Hedqvist (1962) was unaware of the true characters and described a new genus and species, *Herulia sundholmi* from Sweden. He placed *Herulia* close to the genus *Sphegilla* Debauche, overlooking the presence of the ring-like second funicular segment. Taguchi (1977) followed Annecke and Doutt's (1961) classification. Schauff (1984) synonymized *Herulia* Hedqvist on the grounds that *C. sundholmi* is a rather aberrant species but it seems to fit into the genus *Camptoptera* in most characters. There are number of good diagnostic characters to warrant a subgeneric rank in *Macrocamptoptera*. These characters are included under the subgenera.

Subgenus *Camptoptera* Foerster

(Figs. 14, 62)

Camptoptera Foerster, 1856: 116, 119, 144.

Distribution: Worldwide.

Diagnosis: This subgenus differs from *Macrocamptoptera* Girault by having the following characters: entire body smooth; radicula very short, about 0.25 length of scape; frenal groove absent;

scutellum subrectangular with pair of setae; metasomal spiracle not stalked; and metasomal tergum 3 about 0.33 length of post petiolar region of metasoma.

The members of the subgenus *Camptoptera* are cosmopolitan in distribution and attack eggs of Buprestidae and possibly Cicadellidae, Thripidae and Aleyrodidae (Schauff, 1984).

List of species from the New World:
angustipennis (Ogloblin), 1947: 504.
brunnea Dozier, 1933: 97.
loretoensis Ogloblin, 1947: 495.
minutissima Dozier, 1932: 89.
missionica Ogloblin, 1947: 499.
pulla Girault, 1909: 27.
reticulata Ogloblin, 1947: 501.
semialbata Ogloblin and Annecke, 1961: 302.

Subgenus *Macrocamptoptera* Girault

(Figs. 15, 64, 112-116)

Macrocamptoptera Girault, 1910: 239.
Type-species: *Camptoptera metotarsa* Girault. By original designation. Deposited in USNM. (examined).

Distribution: Brazil, Canada, Chile, Ecuador, Panama, United States.

Diagnosis: Subgenus *Macrocamptoptera* differs from subgenus *Camptoptera* in having the following characters: body reticulate to microreticulate (Figs. 112, 113); radicula at least twice as long as wide, not clearly separated from scape (Fig. 15); anterior scutellum and posterior scutellum transverse (Fig. 114); posterior scutellum with row of punctures (frenal groove) (Fig. 114); scutellum without pair of setae; metasomal spiracle stalked; tergum 2 nearly as long as post petiolar region of metasoma (Fig. 113).

Discussion: Annecke and Doutt (1961) placed *Macrocamptoptera* Girault (1910) in synonymy with *Camptoptera* Foerster.
I found that the species of *Macrocamptoptera* Girault are a distinct group within the genus *Camptoptera* and I hereby resurrect the former to subgeneric level.

The members of the subgenus *Macrocamptoptera* are found in the Eastern half of North America through Central and South America. The biology of this group is unknown, however, the members of *Macrocamptoptera* are associated with moist environments.

List of species from the New World:
metotarsa (Girault), 1910: 239.

Key to the subgenera of New World *Camptoptera*

1. Anterior scutellum and posterior scutellum transverse (Fig. 114); frenal groove represented by row of punctures; metasomal tergum 2 as long as length of post petiolar region of metasoma (Fig. 113); body reticulate to microreticulate (Figs. 112, 113) . . *Macrocamptoptera* Girault

- Posterior scutellum subrectangulate, posterior margin broadly rounded; frenal groove absent; metasomal tergum 2 about 0.33 length of post petiolar region of metsoma; body smooth . . . . *Camptoptera* Foerster

Genus *Ooctonus* Haliday

(Figs. 18, 117-121)

Ooctonus Haliday, 1833: 269, 343.
Type-species: *Ooctonus insignis* Haliday. Designated by Westwood. Deposited in NMID. (not examined).
Sphecomicrus Walker, 1846: 50 (Errata).
Type-species: *Ooctonus insignis* Haliday. Designated by O. Peck. Deposited in NMID. (not examined).

Distribution: Worldwide.

Diagnosis: Five-segmented tarsi; metasoma petiolate; female funicle 8-segmented (Fig. 18); male flagellum 11-segmented, pronotum with transverse carina anteriorly; mesosoma usually sculptured (Fig. 118); propodeum with areolate pattern (Fig. 121); hypochaeta much closer to proximal macrochaeta than to distal macrochaeta.

Discussion: Whittaker (1931) gave a key to the Nearctic species of *Ooctonus*.

List of species from the New World:
americanus Girault, 1916*a*: 69.
aphrophorae Milliron, 1947: 217.
auripes Whittaker, 1931: 190.
canadensis Whittaker, 1931: 191.
fuscipes Whittaker, 1931: 189.
occidentalis Whittaker, 1931: 191.
quadricarinatus Girault, 1916*b*: 301.
silvensis Girault, 1916*b*: 70.

Genus *Gonatocerus* Nees

(Figs. 19-23, 55, 66-71, 122-130)

Gonatocerus Nees, 1834: 192.
Type-species: *Gonatocerus longicornis* Nees. Monobasic. Deposited in BMNH. (examined).
Lymaenon Walker, 1846. 18: 49.
Type-species: *Lymaenon acuminatus* Walker. Designated by Gahan and Fagan. Deposited in BMNH. (examined).
Rachistus Foerster, 1847: 203.
Type-species: *Ooctonus litoralis* Haliday. Designated by Gahan and Fagan. Deposited in BMNH (not examined).
Rhachistus Dalla Torre, 1898. 5: 492. Unjustified emendation.
Cosmocomoidea Howard, 1908. 10: 68.
Type-species: *Cosmocomoidea morrilli* Howard. Monobasic. Deposited in USNM. (examined).
Oophilus Enock, 1909: 458.
Type-species: *Oophilus longicauda* Enock. Monobasic. Deposited in BMNH. (examined).
Agonatocerus Girault, 1913*a*: 276.
Type-species: *Agonatocerus humboldti* Girault. By original designation. Deposited in QMBA. (not examined).
Gonatoceroides Girault, 1913*b*: 255.
Type-species: *Gonatoceroides australicus* Girault. By original designation. Deposited in QMBA. (not examined).
Gastrogonatocerus Ogloblin, 1935*b*: 65.
Type-species: *Gonatocerus membraciphagus* Ogloblin. By original designation. Deposited in MLPA (not examined).

Distribution: Worldwide.

Diagnosis: Five-segmented tarsi; metasoma subsessile (Fig. 128) to petiolate (Figs. 122, 125, 130); mesophragma not projected into metasoma; female funicle with 7 or 8 segments (Figs. 19, 20, 23); male flagellum 11-segmented; pronotum without transverse carina; subantennal suture present, extended to clypeal margin (Figs. 124, 129); hypochaeta of marginal vein located about midway between proximal and distal macrochaetae (Fig. 66).

Important references: Ashmead (1904); Debauche (1948); Ogloblin (1956); Boucek and Graham (1972); Schauff (1984), Matthews (1986), Huber (1988).

Discussion: Huber (1988) revised the genus *Gonatocerus* Nees of the Nearctic Region. He recognized 6 species-groups, the *ater*, *deficiens*, *litoralis*, *membraciphagus*, *straeleni* and *sulphuripes*. The *ater* group was further divided into *morrilli*, *ater* and *bucculentus* subgroups. Keys were provided to species-groups and species of *sulphuripes* and *ater* groups. *Gahanopsis* and *Decarthrius* were considered as *deficiens* and *straeleni* groups respectively, although not formally synonymized.

I recognize seven species-groups, namely *ater*, *membraciphagus*, *sulphuripes*, *deficiens*, *straeleni*, *masneri* and *litoralis*. The discussions of each species-group of *Gonatocerus* are given under separate headings except *deficiens* and *straeleni* which are not included here until the species of tropical *Gonatocerus* are considered in a revisionary context and its species relationships are more clearly understood on a worldwide basis by Huber (1988).

litoralis species-group

(Figs. 23, 68)

Distribution: Worldwide.

Diagnosis: Pronotum 3-lobed; dorsellum of metanotum band-like; dorsal surface of scutellum concave; propodeum with denticles but without carinae; ovipositor not extended beyond apex of metasoma; disc of fore wing setose beneath marginal vein.

Comments: I am following Huber (1988) *litoralis* species-group for North America.

membraciphagus species-group

(Figs. 19, 66, 130)

Distribution: Argentina, Brazil, Mexico, United States.

Diagnosis: Pronotum entire; dorsellum of metanotum subcrescentic; mesosoma smooth; scutellum concave; median carinae of propodeum faint and closely parallel; long ovipositor enclosed in membraneous pouch beneath mesosoma which extends forward to mouth region (females); disc of fore wing bare beneath marginal vein.

ater species-group

(Figs. 22, 71)

Distribution: New World.

Diagnosis: pronotum 2-lobed; dorsellum of metanotum rhomboidal; scutellum concave; propodeum with well developed carinae; ovipositor not extended beyond apex of metasoma; disc of forewing bare beneath marginal vein.

masneri species-group

(Figs. 20, 69, 125-127)

Distribution: Dominican Republic.

Diagnosis: Pronotum entire (Fig. 125); dorsellum of metasoma subcrescentic (Fig. 125); scutellum flattened; subparallel rows of punctures and irregular rows of similar sized punctures on lateral margins of propodeum (Fig. 125); petiole slim and cylindrical, 8 x longer than wide (Fig. 125); disc of fore wing pubescent beneath marginal vein (Fig. 69); ovipositor extended from base to apex of metasomal terga.

sulphuripes species-group

(Figs. 21, 70, 128, 129)

Distribution: Worldwide.

Diagnosis: Pronotum 2-lobed; dorsellum of metanotum rhomboidal (Fig. 128); scutellum concave; propodeum without denticles but with weakly developed carinae (Fig. 128); disc of fore wing pubescent beneath marginal vein (Fig. 70); petiole short, broader than long; gaster ovate in dorsal view; ovipositor extended from mid region to apex of metasomal terga.

List of species from the New World:
Species-group abbreviations: (l) *litoralis* group; (m) membraciphagus group; (a) *ater* group; (ma) *masneri* group; (s) *sulphuripes* group; (?) unplaced group.
abbreviatus (Ogloblin), 1953: 7. (?)
acanophorae Ogloblin, 1938: 97 (m)
aequatorianus Ogloblin, 1959*b*: (m)
aethalionis Ogloblin, 1938: 93. (m)
americanus (Brues), 1907: 109. (l)
annulicornis (Ogloblin), 1936: 41. (a)
anomocerus Crawford, 1913: 350. (?)
anthonomi Girault, 1905: 288. (l)
antillensis Dozier, 1937: 132. (?)
appendiculatus (Ogloblin), 1939: 239. (?)
ashmeadi Girault, 1916: 8. (a)
aureus Girault, 1911*b*: 263. (l)
blesticus (Ogloblin), 1957*b*: 39. (?)
bonarensis (Ogloblin), 1939: 249. (?)
brachyurus (Ogloblin), 1938: 32. (?)
brunneus Girault, 1911*b*: 261(1)
bucculentus Huber, 1988: 76. (a)
californicus Girault, 1911*b*: 271. (s)
capitatus Gahan, 1932: 754. (a)
carahuensis Ogloblin, 1957*c*: 36. (?)
caudatus Ogloblin, 1935*b*: 74. (?)

chusqueicolus Ogloblin, 1957*c*: 33. (?)
concinnus (Ogloblin), 1936: 46. (?)
coxalis (Ogloblin), 1959*b*: 51. (a)
cubensis Dozier, 1932: 83. (?)
deficiens (Ogloblin), 1946: 288. (m)
dimorphus Ogloblin, 1938: 101. (m)
dolichocerus Ashmead, 1887: 192. (a)
dorsinger Ogloblin, 1959: 78. (m)
enicmophilus Huber, 1988: 79. (a)
excisus (Ogloblin), 1936: 53. (?)
fasciatus Girault, 1911*b*: 265. (a)
flagellaris Ogloblin, 1959: 61. (?)
flagellatus Huber, 1988: 79. (a)
flaviventris Dozier, 1932: 82. (?)
floridensis Huber, 1988: 46. (s)
gracilicornis (Ogloblin), 1936: 50. (?)
grandis (Ogloblin, 1936: 38. (?)
granulosus (Ogloblin), 1959*a*: 189. (?)
helavai n. sp. (a)
H-luteum (Ogloblin), 1938: 29. (?)
illinoisensis Girault, 1917*f*: 91. (1)
impar Huber, 1988: 69. (a)
inauditus (Ogloblin), 1936: 36. (?)
incomptus Huber, 1988: 67. (a)
inflatiscapus Huber, 1988: 70. (a)
inexpectatus Huber, 1988: 75. (a)
latipennis Girault, 1911*b*: 268. (a)
lissonotus Huber, 1988: 47. (s)
longicornis Nees, 1834: 192. (a)
maga Girault, 1911*b*: 267. (s)
margiscutum Girault, 1914*b*: 150. (?)
maevius Girault, 1911*b*: 272. (l)
marilandicus Girault, 1917*e*: 115. (?)
membraciphagus Ogloblin, 1935*b*: 65. (m)
masneri n. sp. (ma)
metanotalis (Ogloblin), 1938: 35. (?)
mexicanus Perkins, 1912: 21. (s)
monrosi (Ogloblin), 1959*a*: 185. (m)
morrilli (Ogloblin), 1908: 69. (a)
nasutus (Ogloblin), 1939: 244. (?)
necator (Ogloblin), 1939: 241. (?)
nigriceps (Ogloblin), 1955*a*: 19. (m)
nigriflagellum (Girault), 1914*b*: 150.(?)

nigrithorax Ogaloblin, 1953: 2. (?)
nigritarsis Ashmead, 1887: 192. (l)
novifasciatus Grirault, 1911*b*: 266. (a)
ornatus Gahan, 1918: 23. (l)
ovicenatus Lenonard & Crosby, 1915: 545. (a)
partifuscipennis Girault, 1916*d*: 102. (l)
perforator (Ogloblin), 1953: 4. (?)
piriformes (Ogloblin), 1955*a*: 19. (m)
portoricensis Dozier, 1937: 131. (?)
pratensis (Ogloblin), 48: (?)
pusilus Ogloblin, 1935*b*: 68: (m)
pygmaenus Girault, 1911*b*: 269. (l)
quadrivittatus Dozier, 1932: 81. (?)
quirogai (Ogloblin), 1936: 44. (a)
rivalis Girault, 1911*b*: 257. (s)
rufescens (Ashmead), 1904: 521. (?)
schajovskoii (Ogloblin), 1957*c*: 38. (?)
seminiger (Ogloblin), 1959*b*: 53. (a)
setulosus (Ogloblin), 1959*b*: 46. (m)
spiraeularis (Ogloblin), 1935*b*: 70. (m)
stenopterus (Ogloblin), 1936: 33. (?)
tenuipennis (Girautl), 1911*b*: 263. (l)
triangulafer Ogloblin, 1959*b*: 56. (?)
triguttatus Girault, 1916*b*: 297. (a)
tuberculifemur (Ogloblin), 1956: 38. (?)
urocerus Ogloblin, 1935*b*: 72. (?)
utahensis Girault, 1917*b*: 446. (s)
valentinae (Ogloblin), 1959*a*: 192 (?)

Key to the species-group of New World *Gonatocerus*

1. Female funicle 7-segmented 2
- Female funicle 8-segmented 3

2(1). Pronotum divided into 2 lobes widely separated by a membraneous median lobe; hind margin of metasomal terga in females straight; distal hypochaeta of submarginal vein of fore wing present; adeagus strongly curved . . . . *straeleni* group
- Pronotum not divided; posterior margin of metasomal terga in females v-shaped; distal hypochaeta of submarginal vein of fore wing absent; adeagus straight . . . *deficiens* group

3.(2) Ovipositor enclosed in a long membranous pouch which is produced strongly beneath mesosoma and extended to head region; male with median carinae of propodeum faintly visible .... *membraciphagus* group

- Ovipositor normal, without long membranous pouch produced beneath mesosoma; male with median carinae of propodeum directly present or absent 4

4.(3) Pronotum entire; plicae absent; median area of propodeum with 2 rows of punctures in form of U-shape; lateral area entirely punctate(Fig.125); petiole cylindrical, rod-like Fig. 125) .... *masneri* group

- Pronotum divided in 2 or 3 lobes; plicae present; median area of propodeum without 2 rows of punctures in form of U-shape; lateral are smooth to reticulate; metasoma sessile or petiolate but petiole not cylindrical, or metasoma sessile 5

5.(4) Pronotum 3-lobed; propodeum with denticles and without carinae .... *litoralis* group

- Pronotum 2-lobed; propodeum without denticles but with carinae 6

6.(5) Propodeum with 2 long parallel carinae or median carina obovate (Fig. 130); disc of fore wing bare beneath marginal vein (Fig. 71) .... *ater* group

- Propodeum with median carina; disc of fore wing with hairs extending beneath and proximal to marginal vein (Fig. 70) .... *sulphuripes* group

Genus *Anagroidea* Girault

(Figs. 24, 81, 103, 132, 133)

Anagroidea Girault, 1915*a*: 164.
Type-species: *Eustochus dubius* Girault. Monobasic. Deposited in QMBA (examined).

Distribution: Worldwide.
Diagnosis: Four-segmented tarsi; metasoma petiolate; head and mesosoma smooth to coarsely sculptured; head subtriangular in lateral view; vertex concave and transverse in dorsal view; occiput

margined; mandible flattened, sickle-shaped; female funicle 7-segmented; funicular segment 2 ring-like (Fig. 24); male flagellum 11-segmented; propodeum carinulate medially, broadly reticulate laterally; hind wing broad (Fig. 103), broader than all other mymarids.

Important references: Annecke and Doutt (1961); Viggiani (1973*b*).

Discussion: There are about 3 undescribed species from the new world in the CNC.

List of species from the New World:
Anagroidea boweni n. sp.

Genus *Anagrus* Haliday

(Figs. 28, 82)

Anagrus Haliday, 1833: 346.
Type-species: *Ichneumon atomus* Linnaeus. Designated by Westwood, 1840. Deposited in NMID. (not examined).
Pteratomus Packard, 1864: 137.
Type-species: *Pteratomus putmani* Packard. Monobasic. Deposited in USNM. (examined).
Packardiella Ashmead, 1904: 364.
Type-species: *Pteratomus putmani* Packard. Unnecessary new name for *Pteratomus*.
Paranagrus Perkins, 1905: 199.
Type-species: *Paranagrus optabilis* Perkins. Designation by Gahan and Fagan, 1923. Deposited in BPBM. (examined).
Anagrella Bakkendorf, 1962. 34: 372-376.
Type-species: *Anagrella mymaricorne* Bakkendorf. Monobasic. Deposited in ZMUC. (not examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma sessile; mesophragma projected into metasoma; female funicle 6-segmented; club 1-segmented; male flagellum 11-segmented; two triangular paramedial plates on postscutellum; axillae advanced into lateral lobes of mesoscutum; macrochaeta distad to hypochaeta (Fig. 82).

Important references: Annecke and Doutt (1961); Gordh and Dunbar (1977); Schauff (1984).

List of species from the New World;

armatus (Ashmead), 1887: 193.
delicatus Dozier, 1936: 177.
empoascae Dozier, 1932: 86.
epos Girault, 1911*b*: 292.
flaveolus Waterhouse, 1913: 87.
giraulti Crawford, 1913: 259.
incarnatus Haliday, 1833: 347.
nigriceps Girault, 1915*b*: 276.
nigriventris Girault, 1911*b*: 291.
porteri Brèthes, 1917: 82.
puella Girault, 1911*b*: 293.
putnamii (Packard), 1864: 137.
takeyanus Gordh 1977: 85.
urichi Pickles, 1932: 204.
yawi Fullaway, 1944: 57.

Genus *Stethynium* Enock

(Figs. 25, 89)

Stethynium Enock, 1909: 452.
Type-species: *Stethynium triclavatum* Enock. Monobasic. Deposited in BMNH. (examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma sessile; phragma projected into metasoma; female funicle 6-segmented; club 3-segmented; sutures of antennal club diagonal (Fig. 25); male flagellum 11-segmented; face narrow toward mouth; ocelli on triangular stemmaticum; mandible 3-dentate in both sexes; fore wing pubescent and spatulate.

Important references: Enock (1909); Annecke and Doutt (1961).

List of species from the New World:
annulatum Doutt, 1947: 152.
faunum Girault, 1911*b*: 298.

Genus *Neostethynium* Ogloblin

Stethynium (*Neostethynium*) Ogloblin, 1964: 107.
Type-species: *Stethynium* (*Neostethynium*) *stenopterum* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Argentina.

Diagnosis: Four-segmented tarsi; metasoma sessile; phragma projected into metasoma; female funicle 6-segmented; club 3-segmented; male flagellum 11-segmented; sutures of female antennal club at right angle to length of club; female mandible short, rudimentary, without apical teeth; male mandible 3-dentate; ocelli not on triangular stemmaticum; axilla not on line with transscutal suture; fore wing narrow, parallel and pointed at apex; disc of fore wing with 2 rows of hairs lines.

Important reference: Ogloblin (1964).

List of species of the New World:
stenopterum Ogloblin, 1964: 107.

Genus *Erythmelus* Enock

(Figs. 27, 90, 146)

Erythmelus Enock, 1909: 454.
Type-species: *Erythmelus goochi* Enock. Monobasic. Deposited in BMNH. (examined).
Enaesius Enock, 1909: 456.
Type-species: *Enaesius agilis* Enock. Designated by Gahan and Fagan, 1923. Deposited in BMNH. (examined).
Parallelaptera Enock, 1909: 454.
Type-species: *Parallelaptera panis* Enock. Monobasic. Deposited in BMNH. (examined).
Anthemiella Girault, 1911*a*. 13: 185.

Type-species: *Anthemiella rex* Girault. By original designation. Deposited in USNM. (examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma subsessile; mesophragma not projected beyond mesosomal foramen; mandible unidentate; female funicle 6-segmented; club 1-segmented (Fig. 27); male flagellum 11-segmented; metanotum extending over propodeum; female with prominent hypopygium (Fig. 146).

Important references: Annecke and Doutt (1961); Schauff (1984).

List of species from the New World:
angustatus Ogloblin, 1934: 256.
brachialis Ogloblin, 1934: 225.
cingulatus Ogloblin, 1934: 254.
clavatus Ogloblin, 1934: 247.
cingulatus Ogloblin, 1934: 254.
dentatus Ogloblin, 1934: 258.
flandersi Doutt, 1949*a*: 77.
gracilipes (Girault), 1916: 7.
hirtipennis Ogloblin, 1934: 250.
io (Girault), 1911*b*. 294.
longicornis Dozier, 1937: 133.
miridiphagus Dozier, 1937: 133.
noeli (Dozier), 1932: 87.
pastoralis Ogloblin, 1934: 252.
picinus (Girault), 1916*a*: 6.
psallidis Gahan, 1937: 268.
rex (Girault), 1911*a*: 185.
rosas-costai Ogloblin, 1934: 245.
verticillatus Ogloblin, 1934: 245.

Genus *Notomymar* Doutt and Yoshimoto

(Figs. 26, 144, 145)

Notomymar Doutt and Yoshimoto, 1970: 293.
Type-species: *Notomymar aptenosoma* Doutt and Yoshimoto. By original designation. Deposited in BPBM. (examined).

Distribution: Ecuador, South Georgia Island.

Diagnosis: Four-segmented tarsi; metasoma subsessile (Fig. 144); mesophragma not projected beyond mesosomal foramen; head transverse, dorsally rounded, flattened fronto-ventrally, broader than mesosoma; ocelli reduced, nearly without trace and widely separated (Fig. 144); female funicle 6-segmented and club 3-segmented (Fig. 26); male flagellum 9-segmented; mesoscutellum broadly subtriangular; notauli present (Fig. 144).

Discussion: Both sexes of this genus are apterous.

List of species from the New World:
aptenosoma Doutt and Yoshimoto, 1970: 293.
masneri n. sp.

Genus *Idiocentrus* Gahan

(Figs. 134-138)

Idiocentrus Gahan, 1927: 36.
Type-species: *Idiocentrus mirus* Gahan. Monobasic. Original designation. Deposited in USNM, Washington. (examined).

Distribution: Chile.

Diagnosis: Four-segmented tarsi; metasoma subsessile; mesophragma not projected into metasoma; female funicle 6-segmented; club 3-segmented; antenna inserted below middle of face (Fig. 138); fore wing lanceolate, with apex rounded; post petiolar region of metasoma longer than head and mesosoma combined (Fig. 136); ovipositor extended forward within membraneous pouch beneath mesosoma.

Important references: Gahan (1927); Annecke and Doutt (1961).

List of species from the New World:
Idiocentrus sp.

Genus *Omyomymar* Schauff

(Figs. 29, 57, 75, 91, 108)

Omyomymar Schauff, 1983: 543.
Type-species: *Paranaphoidea silvana* Ogloblin. Lectotype designated by Schauff, 1983. Deposited in MLPA. (examined).

Distribution: Argentina, Canada, Trinidad, United States.

Diagnosis: Four-segmented tarsi; metasoma subsessile, compressed laterally; phragma projecting beyond hind coxae; female funicle 6-segmented; club 2-segmented, ultimate segment with nipple-like process apically (Fig. 29); male flagellum 11-segmented (Figs. 57, 108); scape with several enlarged sensilla basiconica; scutellum broader than long; posterior scutellum subcresentic (Fig. 108); fore wing with 2 parallel hair lines on basal half of wing and apex pointed (Figs. 75, 91).

Important references: Schauff (1983, 1984).

List of species from the New World:
alar Schauff, 1983: 548.
clavata (Ogloblin), 1935: 152.
grisselli Schauff, 1983: 548.
silvana (Ogloblin), 1935: 149.

Genus *Australomymar* Girault

(Figs. 30, 83)

Australomymar Girault, 1929: 343.
Type-species: *Australomymar aurigerum* Girault. Monobasic. Deposited in QMBA. (examined).

Distribution: Argentina, Australia, Brazil, Chile, New Zealand.

Diagnosis: Four-segmented tarsi; metasoma subsessile; mesophragma not projected beyond metasomal foramen; female funicle 6-segmented; club 1-segmented; antennal scape, including radicula, 2.5 x longer than length of head and mesosoma combined; radicula nearly 0.5 as long as scape; frons without subantennal sutures;

scutellum nearly square; posterior scutellum subtriangular, posterior margin broadly ovate; dorsellum of metanotum large, subrectangular; propodeum not elevated in median area; basal tergum about 0.5 length of metasoma; venation slightly less than 0.5 of fore wing (Fig. 83); marginal vein slightly longer than submarginal vein.

Important reference: Annecke and Doutt (1961).
An undescribed species of *Australomymar* is known from Chile.

List of species from the New World:
Australomymar sp.

Caenomymar n. genus

(Figs. 31, 84)

Description: Head in dorsal view transverse, about 2 x wider than long, concave; eyes in lateral view large, semiovate, with scattered fine short hairs; ommatidia minute; ocelli arranged in acute triangle, supraorbital suture broken into short pieces; eye margin with 3 long setae; median and frontal sutures narrow and thin; antenna inserted just below transverse suture; female funicle 6-segmented, club 1-segmented (Fig. 31); torulus deep, ovate; subantennal suture deep, extending from toruli to clypeal margin; margin of oral cavity broadly concave; mandible tridentate; malar suture parallel to subantennal suture; malar space 0.3 height of eye.

Mesosoma elongate, 2.5 x longer than wide; pronotum short medially, anterior part nearly in vertical plane, lateral area extended posteriorly, posterior margin V-shaped; mesothoracic spiracle at posterolateral angle; lateral area of pronotum and prosternum forming deep longitudinal V-shape depression; mesoscutum at least 3 x as long as scutellum; anterior median part of scutellum with median suture; posterior scutellum with paramedial longitudinal carinae; axilla acutely triangular; metanotum narrow, band-like; short narrow median area of propodeum elevated with 2 longitudinal V-shaped carinae; mesepimeron and mesepisternum forming large oblongate plate; lateral area of propodeum gradually sloping to lateral margin, smooth without plicae; mesophragma not projected into metasoma; callus with single seta; fore wing narrow, elongate, apex pointed (Fig. 84); tarsi 4-segmented; hind coxa elongate, 1.5 x longer than mid coxa, smooth, with parallel carinae on dorsal margin; wing venation about 0.33 x length of wing; submarginal vein 1.5 x longer than marginal vein (Fig. 84).

Metasoma subsessile; post petiolar region of metasoma laterally compressed, 1.4 x longer than mesosoma; tergum 2 about 0.33 length of post petiolar region of metasoma.

Type-species: *Caenomymar howdeni* n. sp. Present designation.

Distribution: Costa Rica, Ecuador, Panama.

Diagnosis: This genus is similar to *Australomymar* Girault but differs in having the following characters: Antennal scape, including short radicula, about 0.33 length of head and mesosoma combined; subantennal suture with deep foveae on frons; mid area of propodeum narrow and short, elevated with V-shaped carinae; metasomal tergum 2 about 0.33 length of post petiolar region of metasoma; fore wing narrow and elongate, marginal cilia as wide as width of wing; venation about 0.33 length of wing; submarginal vein 1.5 x longer than marginal vein (Fig. 84).

Discussion: The word *Caenos* means recent or new; the gender is neuter.

The male is unknown.

List of species from the New World:
Caenomymar howdeni n. sp.

Genus *Anaphes* Haliday

(Figs. 32, 33, 73, 74, 150, 151)

Anaphes Haliday, 1833: 269, 346.
Type-species: *Anaphes punctum* (Shaw). Designated by Westwood. Deposited in NMID. (not examined).
Panthus Walker, 1846: 49.
Type-species: *Panthus crassicornis* Walker. Designated by Gahan and Fagan. Deposited in BMNH. (examined).
Patasson Walker, 1846: VIII, 50.
Type-species: *Panthus crassicornis* Walker. Monobasic. Deposited in BMNH. (examined).
Flabrinus Rondani, 1877: 180.

Type-species: *Flabrinus fabarius* Rondani. Monobasic. Deposited in MZUF. (not examined).

Anaphoidea Girault, 1909: 167.

Type-species: *Anaphoidea sordidata* Girault. By original designation. Deposited in USNM. (examined).

Clinomymar Kieffer, 1913: 100.

Type-species: *Clinomymar peyerimhoff* Kieffer. Monotypic. Deposition unknown.

Synanaphes Soyka, 1946: 181.

Type-species: *Synanaphes ranalteri* Soyka. Monobasic. Deposited in NHMW. (not examined).

Ferrierella Soyka. 1946: 182.

Type-species: *Ferrierella neopratensis* Soyka. Monobasic. Deposited in NHMW. (not examined).

Hofenderia Soyka. 1946: 183.

Type-species: *Hofenderia pectoralis* Soyka. Monobasic. Deposited in NHMW. (not examined).

Fulmekiella Soyka. 1946a: 184.

Type-species: *Fulmekiella hundsheimensis* Soyka. Monobasic. Deposited in NHMW. (not examined).

Antoniella Soyka, 1950: 121.

Type-species: *Fulmekiella stubaiensis* Soyka. By original designation. Deposited in NHMW. (not examined).

Stammeriella Soyka, 1950: 123.

Type-species: *Stammeriella wolfsthali* Soyka. Monotypic. Deposited in NHMW. (not examined).

Mariella Soyka, 1950: 121.

Type-species: *Mariella superaddita* Soyka. By original designation. Deposited in NHMW. (not examined).

Austranaphes Ogloblin, 1962: 49.

Type-species: *Austranaphes amplipennis* Ogloblin. By original designation. Deposited in MLPA. (not examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma subsessile; mesophragma not projected into metasoma; female funicle 6-segmented; club 1 to 2-segmented (Figs. 32, 33); male flagellum 10-segmented, 11-segmented in species of *Austranaphes*; propodeum divided medially by longitudinal groove; fore wing with a diagonal row of setae extended from middle of submarginal vein to hind margin.

Important references: Ogloblin (1962); Soyka (1950); Graham (1982).

Discussion: Ogloblin (1962) described *Austranaphes* as a subgenus of *Anaphes* Haliday from Patagonia and Argentina, and included 4 new species with a key. The female antenna resembles *Anaphes s.str*. and the male differs in having 13-segmented antenna. At present I am maintaining *Austranaphes* as a subgenus of *Anaphes* until the group is revised.

Opinions on whether species with 2-segmented club should be placed under *Anaphes*, under *Patasson* or as a subgenus (*Patasson*) of *Anaphes* vary greatly. Annecke and Doutt (1961) and Burks (1979) retained *Patasson* Walker as the valid genus. Debauche (1948) and Graham (1982) placed *Anaphes* and *Patasson* as subgenera under *Anaphes*. Schauff (1984) recognized *Anaphes* as the only genus. In this paper, I am following Debauche (1948) and Graham's (1982) classification of placing *Patasson* as a subgenus of *Anaphes*.

Subgenus *Anaphes* Haliday

(Figs. 32, 73, 150, 151)

Anaphes Haliday, 1833: 269, 346.

Distribution: Worldwide.

Diagnosis: This subgenus differs from *Patasson* Walker in having the female antennal club 1-segmented (Fig. 32) and from *Austranaphes* Ogloblin in having the male flagellum 10-segmented.

Discussion: Huber and Rajakulendran (1988) redescribed *Anaphes iole* Girault and synonymized three species based primary on the funicular segments and sensory ridges.

List of species from the New World:
alaskae Annecke and Doutt, 1961: 57.
behmani Girault, 1929: 14.
flavipes (Foerster), 1841: 45.
gracilipes Girault, 1916*c*: 7.
hercules Girault, 1911*b*: 285.
iole Girault, 1911*b*: 284.
perdubius Girault, 1916*c*:6.
picinus Girault, 1916*c*: 6.
nigrellus Girault, 1911*b*: 282.
pratensis Foerster, 1847: 211.

sinipennis Girault, 1911*b*: 280.
tingitiphagus Soares, 1942: 265.

Subgenus *Austranaphes* Ogloblin

Austranaphes Ogloblin, 1962: 49.

Distribution: Argentina.

Diagnosis: This subgenus differs from both *Anaphes s.str.* and *Patasson* Walker in having the male flagellum 11-segmented, and from *Patasson* in having the female antennal club 2-segmented.

List of species from the New World:
amplipennis Ogloblin, 1962: 49.
neuquenensis Ogloblin, 1962: 54.
nunezi Ogloblin, 1962: 51.
pucarobius Ogloblin, 1962: 52.

Subgenus *Patasson* Walker

(Figs. 33, 74)

Patasson Walker, 1846: 50.

Distribution: Worldwide.

Diagnosis: This subgenus is distinguished from *Anaphes* Haliday in having the female antennal club 2-segmented and *Austranaphes* Ogloblin in having the male flagellum 10-segmented.

List of species from the New World:
atomarius (Brethes), 1913: 100.
brunneus (Doutt), 1949*b*: 157.
calendrae (Gahan), 1927: 32.
confertus (Doutt), 1949*b*: 156.
conotracheli (Girault), 1905*a*: 220.
gerrisophagus (Doutt), 1949*b*: 156.
longiclava (Doutt), 1949*b*: 162.
luna (Girault), 1914*a*: 109.
nana (Ogloblin), 1949*b*: 356.

nitens Girault, 1928: 262.
pallipes (Ashmead), 1887: 193.
pullicrura (Girault), 1910: 252.
silvanus (Ogloblin), 1935*c*: 149.
sordidatus (Girault), 1909*b*: 169.

Key to subgenera of New World *Anaphes*: female.

Club 1-segmented (Fig. 32) . . . . *Anaphes* Haliday
. . . . *Austranaphes* Ogloblin
Club 2-segmented (Fig. 33) . . . . *Patasson* Walker

Key to subgenera of New World *Anaphes*: male.

Antennal flagellum 11-segmented . . . *Austranaphes* Ogloblin
Antennal flagellum 10-segmented . . . . *Anaphes* Haliday
. . . . *Patasson* Walker

Genus *Schizophragma* Ogloblin

Schizophragma Ogloblin, 1949: 345.
Type-species: *Schizophragma basalis* Ogloblin. By original designation.
Patasson (Schizophragma) Annecke and Doutt, 1961: 23; De Santis, 1979: 372.
Type-species: *Schizophragma basalis* Ogloblin. By original designation.

Distribution: Argentina, Carribbean Islands, Costa Rica, Guatemala, Hawaii, Mexico, Panama, Trinidad, United States.

Diagnosis: Head transverse, broader than mesosoma; female funicle 6-segmented, club 1 or 2-segmented; male flagellum 11-segmented; fore wing spatulate, marginal ciliae as long as broadest part of wing; anterior scutellum with one pair of setae; posterior scutellum longitudinally divided; propodeum entire; metasoma subsessile; second phragma notched posteriorly; tarsi 4-segmented.

Important references: Dozier (1932); Crawford (1913); Ogloblin (1949*b*), Huber (1987).

Discussion: Ogloblin (1949*b*) described 7 species of *Schizophragma* from South America. Annecke and Doutt (1961) synonymized under *Anaphes*.

Huber (1987) recognized *Schizophragma* Ogloblin as a distinct genus. It was formerly under the subgenus *Patasson*. A tentataive key to the female species with diagonsis, description, host and biology were given. *Schizophragam bicolor* (Dozier) is known from Hawaii (Oahu), Southern U.S. to Argentina.

List of species from the New World:
bicolor (Dozier), 1932: 88.
latipennis (Crawford), 1913: 350.
parvula (Ogloblin), 1949*b*: 355.
peruana (Ogloblin), 1949*b*: 353.
saltensis (Ogloblin), 1949*b*: 352.
squamosa (Ogloblin), 1949*b*: 350.

Genus *Cleruchus* Enock

(Fig. 34)

Cleruchus Enock, 1909: 453.
Type-species: *Cleruchus pluteus* Enock. Monobasic. Deposited in BMNH. (examined).
Stenopteromymar Ferriere, 1952. 25: 41.
Type-species: *Stenopteromymar biciliatus* Ferriere. Monobasic. Deposited in MHNG. (examined).
Paracleruchus Yoshimoto, 1971: 1079.
Type-species: *Paracleruchus pieloui* Yoshimoto. By original designation. Deposited in CNCI. (examined).
Platypatasson, Ogloblin, 1946. 20: 293.
Type-species: *Platypatasson fransseni* Ogloblin. By original designation. Deposited in USNM. (examined).

Distribution: Argentina, Brazil, Canada, Panama, United States.

Diagnosis: Four-segmented tarsi; metasoma subsessile; mesophragma projected beyond hind coxae; female funicle 6-segmented; club 1 (Fig. 34) or 2-segmented; male flagellum 11-segmented; female scape compressed, curved and very long, 1.5 x as long as width of head; fore wing bare except single central row of hair line from base to apex of wing; ovipositor slightly extended beyond apex of metasoma.

Important references: Enock (1909); Viggiani (1974); Schauff (1984).

Discussion: A single female *Cleruchus biciliatus* (Ferriere) was collected from forest litter in Mirabel, Quebec, Canada, this is the first record for this species for North America.

List of species from the New World:
brevicornis Ogloblin, 1940: 597.
biciliatus (Ferriere), 1952: 41.
longicornis Ogloblin, 1955c: 499.
pieloui (Yoshimoto), 1971: 1079.
terebrator (Ogloblin), 1959c: 71.
vagatus (Ogloblin), 1959c: 74.

Genus *Eucleruchus* Ogloblin

Eucleruchus Ogloblin, 1940: 600.

Type-species: *Eucleruchus neivai* Ogloblin. Monobasic. Original designation. Deposited in CNM. (examined).

Distribution: Argentina.

Diagnosis: Four-segmented tarsi; metasoma subsessile; mesophragma projected into metasoma; female funicle 6-segmented; club 1-segmented; fore wing with sides subparallel; radicula not distinctly differentiated; propodeal spiracular setae on propodeum lacking.

Discussions: This genus is known from a single female.

List of species from the New World:
neivai Ogloblin, 1940: 601.

Genus *Ptilomymar* Annecke and Doutt

(Figs. 35, 76, 139-143)

Ptilomymar Annecke and Doutt, 1961: 24, 49.
Type-species: *Ptilomymar rete* Annecke and Doutt. By original designation. Deposited in RDLC. (not examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma subpetiolate; female funicle 8-segmented; club 1-segmented (Fig. 35); male flagellum ll-segmented; mandible bidentate; eye with 15-18 ommatidia (Fig. 141); scutellum concave (Fig. 139); propodeum with parallel carinae and with branched setae (Figs. 140, 142); metasoma with parallel laminae on tergum 2 (Figs. 140, 142); metasomal tergum 3 longest, twice as long as tergum 2 (Fig. 140).
Important reference: Annecke and Doutt (1961).

Discussion: This is first record of this genus known from North America.

List of species from the New World:
rete Annecke and Doutt, 1961: 49.
magnificum, n. sp.

Genus *Eustochus* Haliday

(Figs. 36, 77, 147, 148)

Eustochus Haliday, 1833: 269, 349.
Type-species: *Mymar atripennis* Curtis. Monobasic. Deposited in NMID. (not examined).

Distribution: Canada, Europe, United States.

Diagnosis: Four-segmented tarsi; metasoma petiolate; head reticulate, mesosoma and petiole punctate-reticulate with crater-like pits (Figs. 147, 148); female funicle 6-segmented (Fig. 36); club 2-segmented; male flagellum 11-segmented; fore wing with marginal vein linear, about 0.66 length of submarginal vein (Fig. 77); male apterous.

Important references: Viggiani (1970); Schauff (1984).

Discussion: A new species of *Eustochus* represented only by the female is described here from Cape Breton Highlands National Park, Nova Scotia. This species is related to *Eustochus besucheti* Bakkendorf and represents the first described species of this genus in the New World. A second species from Richwood, Pocahontas Co., West Virginia, has been collected by Dr. Lars Huggert and may be conspecific with the undescribed species reported by Schauff (1984) from Maryland.

Members of the genus *Eustochus* Haliday are associated with moist habitats.

List of species from the New World:
nearcticus n. sp.
Eustochus sp., Schauff, 1984.

Genus *Tanaomymar* Annecke and Doutt

(Figs. 37, 56, 78, 149)

Tanaomymar Annecke and Doutt, 1961: 25, 52.
Type-species: *Tanaomymar mirum* Annecke and Doutt. By original designation. Deposited in USNM. (examined).

Distribution: Ecuador, Trinidad, Venezuela.

Diagnosis: Four-segmented tarsi; metasoma petiolate, very long and slender (Fig. 149); female funicle 6-segmented; club 1-segmented (Fig. 37); male flagellum 11-segmented (Fig. 56), longer than body; male scape short, flattened and ovate; pedicel about 0.5 x width of scape; flagellar segment 1 cylindrical; segments 2-4 ellipsoidal; segment 5-11 flattened and broadly ovate (Fig. 56); propodeum prolonged behind into elongate and cylindrical shape (Fig. 149).

Important reference: Annecke and Doutt (1961).

Discussion: Members of the genus *Tanaomymar* can be distinguished from all other mymarids by their thin, needle-like bodies (Fig. 149).

List of species from the New World:
mirum Annecke and Doutt, 1961: 52.
venezuelaensis n. sp.

Genus *Bruchomymar* Ogloblin

(Figs. 38, 79)

Bruchomymar Ogloblin, 1939*a*: 217.
Type-species: *Bruchomymar mirabilicornis* Ogloblin. By original designation. Deposited in MVMA. (examined).

Distribution: Argentina, Brazil, Ecuador, Trinidad.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented; terminal funicle segment modified into club-like segment (Fig. 38); fore wing pedunculate with broadly concave hind margin (Fig. 79).

Discussion: Ogloblin (1939) and Annecke and Doutt (1961) have apparently misinterpreted the number of antennal club segments in *Bruchomymar*. In the case of the female *Bruchomymar* antenna, the funicle segment adjacent to the club segment is modified into a flat triangular shape, with petiolate apex and with distinct separation from club and without sensillae (Fig. 79).

List of species from the New World:
mirabilicornis Ogloblin, 1939*a*: 218.
soror Ogloblin, 1939*a*: 223.

Genus *Mymar* Curtis

(Figs. 54, 80, 164-166)

Mymar Curtis, 1832: 411.

Type species: *Mymar pulchellum* Curtis. Designated by International Commission of Zoological Nomenclature (Opinion 729, 1965). Syntypes deposited in MVMA. (not examined)
Pterolinononyktera Malac, 1943: 51.
Type species: *Pterolinononyktera obenbergeri* Malac. By original designation. Deposited in NMPC. (not examined)
Ogloblíniella Soyka, 1946: 180.
An unnecessary new name for *Mymar*.
Mymarilla of authors, *nec* Westwood, 1879.

Distribution: Worldwide

Diagnosis: Four-segmented tarsi; metasoma petiolate, at least 5 x longer than wide; female funicle 6-segmented; funicle segment 2 about 10 x longer than width (Fig. 54); club 1-segmented; male flagellum 11-segmented; scape about 5 x longer than wide and constricted in middle; fore wing stalked for 0.66 x its length; hind wing hair-like, without membrane (Fig. 80).

Important references: Annecke and Doutt (1961); Schauff (1984).

List of species from the New World:
antillanum Dozier, 1937: 130.
cincinati Girault, 1917*d*: 99.
pulchellum Curtis, 1832: 411.
taprobancium Ward, 1875: 197.
venusta Girault. 1911*f*: 188.

Genus *Neomymar* Crawford

(Figs. 39, 85, 167-170)

Neomymar Crawford, 1913. 46: 351.
Type-species: *Neomymar vierecki* Crawford. By original designation. Deposited in USNM. (examined).

Distribution: Costa Rica, Ecuador, Mexico, Panama, Trinidad, United States.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented (Fig. 39); male flagellum 11-segmented; postdorsal margin of eye with single enlarged seta;

mesothoracic spiracle stalked (Fig. 168); axilla with blunt, enlarged seta; fore wing stalked or narrow part of wing 0.5 length of wing (Fig. 85).

Important references: Annecke and Doutt (1961); Schauff (1984).

List of species from the New World:
vierecki Crawford, 1913: 351.

Genus *Erdosiella* Soyka

(Figs. 40, 86, 161-163)

Erdosiella Soyka, 1956: 16.
Type-species: *Erdosiella acarensis* Soyka. By original designation. Deposited in HNHM. (not examined).
Stenomymar Ogloblin, 1967*a*: 184. *N. Syn*.
Type-species: *Stenomymar decoratus* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Argentina, Brazil, Ecuador, Panama, Venezuela.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented, with 2 distal funicle segments swollen and club-like (Fig. 40); anterior 0.66 of pronotum and mesoscutum coarsely reticulate (Fig. 161); 2 long setae located mid anteriorly of propodeum.

This genus is related to *Tanaomymar* Annecke and Doutt but *Erdosiella* can be distinguished by the following characters: coarse reticulation of pronotum and mesoscutum (Fig. 161), mesoscutum 0.66 length of scutellum; propodeum about 0.33 length of scutellum; female funicle segments 1 to 3, subequal in length (Fig. 86); disc of fore wing with 3 radiating hair lines and bare areas between hair lines; petiole of male as long as remainder of post petiolar region of metasoma.

Discussion: After comparing a female and a male species of *Stenomymar* Ogloblin from Brazil in the CNC, I find that *Stenomymar* is congeneric with *Erdosiella* Soyka (1956), and therefore, I am synonymizing the genus *Stenomymar*.

List of species from the New World:
acarensis Soyka, 1956: 17.
decorata (Ogloblin), 1967*a*: 184.

Entrichopteris n. genus

(Figs. 41, 87)

Description: Head in dorsal view, 1.6 x wider than long, subrectangular; vertex concave, occiput rounded; eyes of moderate size, ovate, bare with minute ommatidia; ocelli arranged in acute triangle; transverse and supraorbital sutures narrow; eye margin with deep linear foveae; post frontal carina absent; female funicle 6-segmented; club 1-segmented; antenna inserted at middle of face (Fig. 41); frons deeply convex, clypeus subrectangular with anterior margin forming deep fovea; mandible broad, tridentate; malar suture absent; malar space about 0.5 height of eye.

Mesosoma tall and narrow, 2.3 x longer than wide; pronotum short, divided longitudinally with mesothoracic spiracle at postlateral angle, hind margin broadly V-shaped; mesoscutum 1.5 x longer than scutellum; notauli converging, as wide as deep, anterior margin of mesoscutum with deep rounded fovea; scutellum as long as wide, somewhat flattened; posterior scutellum narrow, band-like; axilla small, subtriangular; metanotum narrow, band-like; propodeum sloping diagonally with short narrow median carina, as in *Polynema*; plicae absent; propodeal spiracle situated in horizontal depression along anterior margin; legs slim and long; tarsi 4-segmented; hind coxa elongate, ovate, smooth; fore wing broadly spatulate with petiolate base (Fig. 87), submarginal vein 1.5 x longer than marginal vein, both subequal in thickness except apical portion of marginal vein slightly swollen; stigmal vein pointed apically; disc with bristle-like hairs, posterior marginal setae long, slightly longer than widest width of wing.

Metasomal petiole subcylindrical, as long as hind coxa; base of post petiolar region of metasoma conical, basal metasomal tergum 2 (2 plus 3 fused) slightly tapering to apex, slightly longer than 0.5 length of post petiolar region of metasoma(17: 13), posterior half sharply tapering to apex, and slightly flattened dorsally.

Type-species: *Entrichopteris eberhardi* n. sp. Present designation.

Distribution: Colombia, Costa Rica, Venezuela.

Diagnosis: This genus is related to *Tetrapolynema* Ogloblin but differs in having the following characters: fore wing petiolate (Fig. 87); disc subrectangular, apex broadly truncate; disc densely hairy, marginal cilia longer than width of disc; metasomal tergum 2, slightly longer than 0.5 length of post petiolar region of metasoma; propodeum with pair of long setae, each seta closer to lateral margin of propodeum.

Discussion: The word *entrichos* means hairy; *pteris* means wing; the gender is masculine.

List of species from the New World:
eberhardi n. sp.

Masonana n. genus

(Figs. 42, 88, 171-173)

Description: Head in dorsal view, 1.2 x wider than long, concave (Fig. 171); occiput rounded; eyes semi-ovate, with scattered minute hairs and tiny ommatidia (Fig. 173); ocelli indistinct, lateral and frontal margins of ocelli with deep foveae; transverse suture indistinct (Fig. 173); post frontal carina absent; female funicle 6-segmented, club 1-segmented; male flagellum ll-segmented; antenna inserted at middle of face; frons deeply concave with 2 pits above toruli (Fig. 173); face below toruli bulging forward, anterior 0.5 sloping ventrally; clypeus ellipsoidal; oral margin subrounded; mandibles bidentate; malar suture present; malar space 0.25 height of eye; post occipital suture suture not extending to occipital forman.

Mesosoma elongate, 2.2 x longer than wide (Fig. 171); pronotum short medially, laterally extended to mid margin of mesoscutum; mid anterior margin divided by rectangular plate and posterior margin forming a v-shaped(Fig. 171); mesoscutum as long as scutellum, extremely concave in lateral view; scutellum 1.5 x longer than wide, concave; posterior scutellum narrow, band-like; axilla small, subtriangular, separated from mesoscutum anteriorly by vertical foveae; metanotum narrow, band-like; propodeum nearly vertical; median carina and plicae absent (Fig. 171); propodeal spiracle small, rounded, near anterior margin of propodeum; legs slim and long; hind coxa elongate, smooth; tarsi 4-segmented; fore wing broadly spatulate (Fig. 88); disc pubescent with 2 brownish spots at apex and brownish band at base; submarginal vein long, 2.4 x longer than marginal vein; marginal vein 3 x longer than wide; posterior marginal cilia about 0.25 length of width of disc, densely pubescent; hind wing long and narrow with well developed marginal cilia.

Metasomal petiole (Fig. 173) as long as hind coxa; base of post petiolar region of metasoma conical; metasomal tergum 2 about 0.5 length of post petiolar region of metasoma, posterior half tapered to apex (Fig. 172).

Type-species: *Masonana polynemoides* n. sp. Present designation.

Distribution: Costa Rica, Ecuador, Panama, Venezuela.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented (Fig. 42); male flagellum 11-segmented; scape with rasp-like scales (Fig. 173); post occiputal suture not extending to occipital forman; vertex and pronotum with blunt, spine-like setae (Fig. 173); pronotum divided paramedially by rectangular plates (Fig. 171); post petiolar region of metasoma conical(Fig. 172).

Discussion: The gender is feminine. It is a pleasure to name this genus in honor of my colleague Dr. W.R.M. Mason.

List of species from the New World:
polynemoides n. sp.

Genus *Oncomymar* Ogloblin

Oncomymar Ogloblin, 1957*a*: 414.
Type-species: *Oncomymar dipteron* Ogloblin. Monobasic. Deposited in CIZC. (not examined).

Distribution: Juan Fernandez Islands.

Diagnosis: Four-segmented tarsi; metasoma petiolate; male flagellum 11-segmented; ocelli absent; pronotum conical; scutellum without frenal groove; mesoscutum greatly reduced to tiny sclerite and notauli absent; propodeum without median carina; fore wing spatulate, Rs vein as long as submarginal; hind wing rudimentary, short and cylindrical.

Important reference: Ogloblin (1957*a*).

Discussion: This genus is known from males only and is 1 of 4 genera belonging to "Cremnomymarini" of Ogloblin, 1957a which includes *Nesopolynema* Ogloblin, *Scolopsopteron* Ogloblin and *Cremnomymar* Ogloblin.

List of species from the New World:
dipteron Ogloblin, 1957*a*: 414.

Genus *Scolopsopteron* Ogloblin

Scolopsopteron Ogloblin, 1952: 127.
Type-species: *Scolopsopteron kuscheli* Ogloblin. By original designation. Deposited in CIZC (not examined).

Distribution: Juan Fernandez Islands.

Diagnosis: Four-segmented tarsi; metasoma petiolate; male flagellum 11-segmented; pronotum entire, conical; frenal groove of scutellum represented by row of punctures; propodeum with large X-shaped median carinae; fore wing narrow, parallel-sided, apex acutely pointed; Rs vein as long as submarginal and marginal veins; hind wing rudimenary, without haumli.

Important references: Ogloblin (1952); Annecke and Doutt (1961).

Discussion: The female is unknown.

List of species from the New World:
kuscheli Ogloblin, 1952: 128.

Genus *Nesopolynema* Ogloblin

Nesopolynema Ogloblin, 1952: 132.
Type-species: *Nesopolynema caudatum* Ogloblin. By original designation. Deposited in CIZC (not examined).

Distribution: Chile, Juan Fernandez Islands.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented; ocelli present; pronotum medially divided; frenal groove of scutellum represented by row of punctures; fore wing elongately spatulate; marginal vein elongate, about 6 x longer than wide; propodeum with broad V-shaped carinae.

Important references: Ogloblin (1952); Annecke and Doutt (1961).

Discussion: The male is unknown.

List of species from the New World:
caudatum Ogloblin, 1952: 132.

Genus *Cremnomymar* Ogloblin

Cremnomymar Ogloblin, 1952: 120.
Type-species: *Cremnomymar fernandezi* Ogloblin. By original designation. Deposited in CIZC (not examined).

Distribution: Chile, Juan Fernandez Islands.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented; male flagellum 11-segmented; ocelli present; pronotum entire, broadly convex anteriorly; scutellum with frenal groove; propodeum with broad Y-shaped carinae; posterior propodeum with large modified coxal flange; fore wing long and spatulate; hairs on disc modified, scale-like; hind wing normally developed.

Important references: Ogloblin (1952); Annecke and Doutt (1961).

List of species from the New World:
alticola Ogloblin, 1957*a*: 418.
fernandezi Ogloblin, 1952: 120.
imperfectus Ogloblin, 1952: 124.
nigriclavus Ogloblin, 1957*a*: 420.

Genus *Parapolynema* Fidalgo

Parapolynema Fidalgo, 1982: 92.
Type species: *Parapolynema sagittifer* Fidalgo. By original designation. Deposited in MLPA. (not examined).

Distribution: Argentina.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club l-segmented; male flagellum ll-segmented; pronotum narrow and broad, truncate anterior margin, posterior margin broadly concave; notauli incomplete; frenal groove represented by row of punctures; propodeum with median carina and base of plicae with lateral projection; petiole cylindrical, longer than hind coxa; fore wing elongately ovate, marginal cilia as long as breadth of wing; marginal vein short, 2-3 x as long as wide; post marginal vein on anterior margin of fore wing short, slightly shorter than submarginal vein.

Important reference: Fidalgo (1982).

List of species for the New World:
sagittifer Fidalgo. 1982: 97.

Genus *Polynemula* Ogloblin

Polynemula Ogloblin, 1967*a*: 190.
Type-species: *Polynemula rufosignata* Ogloblin. By original designation. Deposited in MLPA. (not examined).

Distribution: Argentina.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented; radicula of antenna about 0.33 length of scape; face with 2 diagonal carinae extending from toruli to margin of clypeus; anterior pronotum broadly rounded; propodeum with longitudinal, vertically elevated, median ridge from petiolar emargination to anterior margin of propodeum; marginal vein about 0.33 length of submarginal.

Important reference: Ogloblin (1967*a*).

Discussion: This genus is known from a single female.

List of species from the New World:
rufosignata Ogloblin, 1967*a*: 190.

Genus *Tetrapolynema* Ogloblin

(Figs. 178, 179)

Tetrapolynema Ogloblin, 1946: 279.
Type-species: *Tetrapolynema mexicanum* Ogloblin. By original designation. Deposited in USNM. (examined).

Distribution: Colombia, Ecuador, Mexico.

Diagnosis: Four-segmented tarsi; metasoma petiolate; head and mesosoma with blunt, enlarged setae; head triangular in frontal view; male flagellum 11-segmented; antenna inserted on shelf or mantle (Fig. 179); scape short, not extending to anterior ocellus; postmarginal vein absent; scutellum with median longitudinal groove; metasomal tergum 2 extending 0.66 length of post petiolar region.

Important references: Ogloblin (1946); Annecke and Doutt (1961).

Discussion: The female is unknown.

List of species from the New World:
mexicanum Ogloblin, 1946: 279.

Restisoma n. genus

(Figs. 43, 99, 174-177)

Description: Head entirely micropunctate; head in dorsal view 2.0 x wider than long (Fig. 174); occiput rounded, eyes semi-ovate, hairy, moderate sized, ommatidia minute (Fig. 177); ocelli arranged in acute triangle (Fig. 176); transverse suture narrow and margined; supraorbital suture extending to base of toruli; part of vertex sunken and flattened; frons and face concave; antenna inserted at middle of face and along eye margin (Fig. 177); radicula absent; female funicle 6-segmented; club 1-segmented, oblong, 4 x longer than wide (Fig. 43); area below toruli with oval shaped depression, lateral margins forming tall ridge; suture extending from outer margin of toruli to lateral corner of oral margin (Fig. 177); area above clypeus with longitudinal depression; mandible bidentate; malar space 0.33 height of eye.

Mesosoma slightly concave dorsally, 1.4 x longer than wide; mesoscutum coarsely reticulate (Fig. 174); pronotum divided medially at anterior dorsal margin with triangular sclerite medially (Fig. 176); posterior margin forming broad v-shaped; mesoscutum much longer than pronotum; notauli distinct and complete (Fig. 174); axilla small, triangle shaped, apices not meeting medially below lateral lobe of mesoscutum; scutellum 1.8 x broader than long; posterior scutellum 0.5 length of scutellum (Fig. 174); dorsellum of metanotum ribbon-like; propodeum smooth, with subtriangle-like carinae and deep groove extending from near propodeal spiracle to apex of lateral margin (Fig. 174); ridge forming along side of lateral groove; propodeum near basolateral corner with long seta; anterior lateral margin of propodeum with small rounded spiracle (Figs. 174, 175); hind coxa stout, smooth; tarsi 4-segmented. Fore wing narrow, elongate ovate (Fig. 99), like *Anaphes*; submarginal vein 2 x longer than marginal; marginal vein 2.5 x longer than wide; posterior marginal cilia as long as breadth of wing; disc pubescent; hind wing narrow, blade-like

Metasomal petiole short, cylindrical, 2.5 x longer than wide (Fig. 174); post petiolar region of metasoma ovate.

Type-species: *Restisoma howdeni* n. sp. Present designation.

Distribution: Colombia, Costa Rica, Panama.

Diagnosis: Antennal club oblong, 4 x longer than wide (Fig. 43); mesoscutum coarsely reticulate (Fig. 174); triangle-like carinae of propodeum with deep groove extended from near propodeal spiracle to apex of lateral margin, ridge forming along side of groove (Fig. 174); submarginal vein twice as long as marginal (Fig. 99).

Discussion: The word *restis* means rope; *soma* means body. The gender is neuter.

List of species from the New World:
howdeni n. sp.

Genus *Caraphractus* Walker

(Figs. 44, 92, 152, 153)

Caraphractus Walker, 1846: 49-50, 52.
Type-species: *Caraphractus cinctus* Walker. Monobasic. Deposited in NMID. (not examined).
Valkerella Westwood, 1879: 584.
Type-species: *Polynema natans* Lubbock. Monobasic. Deposited in BMNH. (not examined).

Distribution: Canada, Europe, United States, U.S.S.R.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; male flagellum 11-segmented; body heavily sclerotized (Fig. 152); anterior scutellum as wide as long and posterior scutellum 2 x as wide as long; post petiolar region of metasoma strongly compressed laterally, keeled ventrally.

Discussion: The members of this genus are associated around aquatic environment.

List of species from the New World:
cinctus Walker, 1846: 52.

Genus *Chaetomymar* Ogloblin

Chaetomymar Ogloblin, 1946: 277.
Type-species: *Chaetomymar kusnezovi* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Argentina, Brazil, Canada, United States; Palearctic, Oriental, Africa.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented; male flagellum ll-segmented; pronotum entire or divided longitudinally; pronotum with many strong, blunt setae; mesoscutum with a single elongated, blunt setae on axillae; mandible tridentate, recurved apically; circular orifice between teeth and base of mandibles; propodeum without median carina and with 4 short setae; fore wing hairy below venation.

Important references: Ogloblin (1946); Annecke and Doutt (1961); Schauff (1984); Prinsloo (1986).

Discussion: The members of this genus attack eggs of Lyonetiidae (Lepidoptera) and Cicadellidae (Homoptera)(Prinsloo, 1986).

Genus *Cnecomymar* Ogloblin

(Figs. 45, 97, 154-156)

Cnecomymar Ogloblin, 1963*a*: 65.
Type-species: *Cnecomymar major* Ogloblin. Monobasic. Deposited in MLPA. (not examined).

Distribution: Argentina, Brazil, Canada, Mexico, Panama, Venezuela.

Diagnosis: Four-segmented tarsi; metasoma petiolate, as long as hind coxa; female funicle 6-segmented; club 1-segmented (Fig. 45); male flagellum 11-segmented; presence of stout, blunt, spine-like setae on head (Figs. 154, 156), pronotum and mesoscutum; pronotum 0.5 length of mesoscutum (Fig. 154); notauli complete; scutellum as long as wide, more or less flattened dorsally (Fig. 154); propodeum without median carina (Fig. 154); legs slim and long (Fig. 155); post petiolar region of metasoma ellipsoidal in lateral view (Fig. 155).

Important references: Annecke and Doutt (1961); Ogloblin (1963*a*).

List of species from the New World:
bimaculata Ogloblin, 1963*a*: 74.
major Ogloblin, 1963*a*: 65.
meridionalis Ogloblin, 1963*a*: 67.
parvulus Ogloblin, 1963*a*: 73.
pauperatus Ogloblin, 1963*a*: 71.
terebrator Ogloblin, 1963*a*: 77.

Genus *Stephanodes* Enock

(Fig. 180)

Stephanodes Enock, 1909: 457.
Type-species: *Stephanodes elegans* Enock. Monobasic. Deposited in BMNH. (examined).
Eustephanodes Ogloblin, 1967*a*: 194. *N. Syn.*
Type-species: *Eustephanodes missionicus* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented; male flagellum 11-segmented; scape with rasp-like scales (Fig. 180); mesothoracic spiracle jointed to posterio-lateral corner of pronotum.

Discussion: Narayanan and Subba Rao (1961) placed *Stephanodes* as a subgenus of *Polynema*. Schauff (1984) kept *Stephanodes* a valid genus.

Based on a comparison made between specimens of *Stephanodes* Enock and *Eustephanodes* Ogloblin, I can see no differences in the position and structure of the ocelli, the parallel median carinae and the dorso-lateral carinae of the pronotum or the position of the postero-lateral denticles of the propodeum. I believe they are congeneric and I hereby synonymize *Eustephanodes* under *Stephanodes*.

List of species from the New World:
missionicus (Ogloblin), 1967*a*: 194.
psecas (Girault), 1911*b*: 319.

Genus *Kalopolynema* Ogloblin

Kalopolynema Ogloblin, 1960*b*: 3.
Type-species: *Kalopolynema discrepans* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Argentina.

Diagnosis: Four-segmented tarsi; metasoma with short, stubby petiole, about 0.5 to 0.6 length of hind coxa, with dorsal surface flattened and ventrally concave; female funicle 6-segmented; club 1-segmented; notauli broad, supraorbital suture complete, extended full dorsal length of eye; pronotum with incomplete median suture; propodeal teeth at petiolar insertion; frenal groove indicated by row of punctures.

Discussion: Described from 2 female specimens on slides, 1 from Bella Vista (Prov. de Buenos Aires), October 1956, A.O. and the other slide from Tigre, B(uenos) A(ires), April 1942, A.O., both identified in Ogloblin's hand-writing as *Kalopolynema dictynaum* A.O. (manuscript name). The specimens agree with the description and figures from the text. It is likely that Ogloblin forgot to change the name on the slides. Ogloblin has labelled type on the specimen bearing the locality label "Bella Vista". Males are unknown.

List of species from the New World:
discrepans Ogloblin, 1960*b*: 3.

Genus *Platypolynema* Ogloblin

Platypolynema Ogloblin, 1960*b*: 7.
Type-species: *Platypolynema cautum* Ogloblin. By original designation. Deposited in MLPA. (examined).

Distribution: Argentina.

Diagnosis: Four-segmented tarsi; metasoma petiolate; male flagellum 11-segmented; notauli fine, without fossa at anterior end; supraorbital suture incomplete, reaching 0.5 length of eye; pronotum divided medially; propodeal teeth absent at petiolar insertion; frenal groove indicated by fine suture.

Discussion: The female is unknown. This genus is close to *Kalopolynema* Ogloblin but differs in having the pronotum not completely divided, the scutellum with fine frenal groove and a pair of propodeal setae at anterior-lateral margins of petiolar insertion.

List of species from the New World:
Platypolynema cautum Ogloblin, 1960*b*: 7.

Tanyostethium n. genus

(Figs. 46, 101)

Description: Head in dorsal view about twice as wide as long; vertex rectangular; occiput rounded; eyes ovate, small, bare with minute ommatidia; suborbital suture short, not reaching posterior margin of eye; transverse suture short, not reaching lateral margin of eye; supraorbital and occipital sutures extending to occipital foramen; post frontal carina absent; funicle 6-segmented, club 1-segmented (Fig. 46); antenna inserted near transverse suture; frons with short median longitudinal suture between transverse suture and toruli; face in frontal view convergent toward mouthpart; subantennal carina converging toward lateral margin of mouth; mandibles 3-dentate; clypeus subrectangular, malar space 0.5 height of eye; postgena and gena large and bulging.

Mesosoma elongate, 2.5 x longer than wide; pronotum elongately triangular in lateral view, divided medially by longitudinal carina; pronotum as long as mesoscutum and margined anteriolaterally; notauli complete; posterior margin broadly concave; axilla acute, triangular, apex not reaching notauli; scutellum as long as wide; posterior scutellum short, ribbon-like; metanotum short, slightly broader than posterior scutellum; anterior lateral corner of propodeum extending to middle of flattened scutellum, broadly triangular; median carina distinct with longitudinal depression; plicae present, not extending to spiracle; propodeal spiracle tiny, rounded, nearly touching anterior margin; legs slim and long; female hind coxa rounded in cross-section, elongate, not longer than petiole; male coxa 1.3 x longer than petiole; tarsi 4-segmented; fore wing long, spatulate (Fig. 101), 2 broad dark brown bands at middle and apex and short narrow band at marginal vein; faint marking on middle of fore wing in male; marginal and stigmal veins confluent; posterior marginal cilia 0.5 width of wing; marginal vein 2 x as long as wide; basal 0.33 of fore wing bare, 3-5 short hair lines at apical 0.66 length of wing in female (Fig. 101); distal 0.66 of disc sparsely pubescent in male; hind wing narrow, blade-like.

Metasomal petiole subcylindrical, in female slightly longer than hind coxa (2.5: 2.0); post petiolar region of metasoma of female about 0.33 length of petiole, conical at base concave dorsally, ventrally keeled, posterior 0.66 tapered apically; length of ovipositor slightly shorter than post petiolar region of metasoma; petiole of male as long as post petiolar region of metasoma.

Type-species: *Tanyostethium elongatum* n. sp. Present designation.

Distribution: Ecuador, Panama.

Diagnosis: *Tanyostethium* superficially resembles the *helevai* species-group of *Acmopolynema* but differs in having the following characters: propodeum with median carina, pronotum without median carina; marginal and stigmal vein confluent; hind coxa rounded in cross-section.

Discussion: The word *Tanyo* means long or elongate; *stethos* means breast. The gender is neuter.

List of species from the New World:
Tanyostethium elongatum n. sp.

Genus *Acmopolynema* Ogloblin

(Figs. 47-50, 93-95, 98)

Acmopolynema Ogloblin, 1946: 286.
Type-species: *Stichothrix bifasciatipennis* Girault. By original designation. Deposited in USNM. (examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented (Figs. 47-50); club 1-segmented; male flagellum 11-segmented; lateral margin of pronotum with or without a sharp edge or with or without row of short spine-like setae; frenal groove of scutellum usually with a row of punctures; propodeum with V-shaped carina; hind tibia with 4 longitudinal rows of short bristles.

Discussion: I was fortunate in having access to a large collection of *Acmopolynema* specimens from the Nearctic and Neotropical Regions. A careful morphological study of specimens from different localities made it possible to separate 4 distinct species-groups of *Acmopolynema* namely, *helavai* group, *bifasciatipennis* group, *pecki* group and *plaumanni* group.

Important references: Schauff (1981); Schauff (1984).

bifasciatipennis species-group

(Figs. 47, 98)

Distribution: Worldwide.

Diagnosis: Small to moderately sized, 1.0-2.0 mm in length; "neck region" or cervical sclerite of propleuron with plates; pronotum completely divided medially, with pronotal spiracles at posto-lateral angles, 1.5 x as long as wide dorsally; post petiolar region of metasoma of female not compressed laterally; hind coxa subclyindrical.

Discussion: There are 14 undescribed species of this species-group in the CNC with specimens from Mexico south to Argentina. I have examined all of the North American species listed below except *braziliense* and *hervali* from South America.

helavai species-group

(Figs. 48, 93)

Distribution: Costa Rica, Ecuador, Mexico, Panama, Venezuela,

Diagnosis: Species large, 2.5-3.0 mm in length; "neck region" or cervical sclerite of propleuron with plates; face and scape entirely covered with rasp-like scales; pronotum subtriangular, as long as wide dorsally; lateral margin forming sharp edge; posterior margin broadly emarginate; hind coxa elongate with 3 corners sharply margined; legs extremely long; ovipositor long, up to 1.3 x length of post petiolar region of metasoma; fore wing long, spatulate (Fig. 93) and extending full length of body.

Discussion: This species-group is known from males only and may be restricted in low lying areas of Central and South America.

pecki species-group

(Figs. 49, 94)

Distribution: Brazil, Costa Rica, Trinidad, Venezuela.

Diagnosis: Species small, 1.2 mm in length; "neck region" or cervical sclerite of propleuron with subtriangular plates; pronotum usually not divided medially or faintly indicated posteriorly, 1.5 x as long as wide dorsally; hind coxa elongate-ovate, inner side flattened; basal half of post petiolar region of metasoma slightly compressed laterally, tapered posteriorly; ovipositor 0.33 to 0.5 length of post petiolar region of metasoma.

Important references: Annecke and Doutt (1961); Schauff (1984).

Discussion: The males are unknown. There are several undescribed species in the CNC.

plaumanni species-group

(Figs. 50, 95)

Distribution: Brazil, Ecuador, Trinidad, Venezuela.

Diagnosis: The *plaumanni* species-group is similar to *bifasciatipennis* species-group but differs in having the following characters: "Neck region" or cervical sclerite of propleuron without plates; pronotum 1.5 x as long as wide dorsally; hind coxa spindle shaped, tapering posteriorly; post petiolar region of metasoma of female ovate, flattened laterally with ovipositor coiled at base and extended posteriorly along ventral keel; ovipositor short, 0.25 to 0.33 length of post petiolar region of metasoma. A broad V-shaped median carina of propodeum appears constant for this group.

Discussion: The males are unknown.

List of species from the New World:
Species-group abbreviations: (b) *bifasciatipennis*; (h) *helavai*;
(p) *pecki*; (pl) *plaumanni*; (?) placement unknown.
brasiliense (Ashmead), 1904: 521. (b)

bifasciatipennis (Girault), 1908*a*: 115. (b)
helavai n. sp. (h)
hervali Gomes, 1948: 418. (?)
immaculatum Schauff, 1981: 453. (b)
miamiense Schauff, 1981: 449. (b)
plaumanni n. sp. (pl)
pecki n. sp. (p)
rufescens Ashmead, 1904: 521. (?b)
sema Schauff, 1981: 447. (b)
uma Schauff, 1981: 451. (b)
varium (Girault), 1917*f*: 92. (b)
vittatipenne (Dozier), 1932: 83. (b)

Key to the species-group of New World *Acmopolynema*

1. Hind coxa triangular, 3 corners sharply margined in cross-section, as long as or longer than metasomal petiole; "neck region" or cervical sclerite of propleuron with plates; pronotum as long as wide dorsally . . . . . *helavai* group

- Hind coxa subcylindrical in cross-section, as long as or shorter than metasomal petiole; "neck region" or cervical sclerite of propleuron with or without plates; pronotum 1.5 x broader than long dorsally 2

2. "Neck region" or cervical sclerite of propleuron without plates; ovipositor 1.5 x length of post petiolar region of metasoma; mid anterior margin of pronotum forming an acute v-shaped suture with carinae . . *plaumanni* group

- "Neck region" or cervical sclerite of propleuron with plates; ovipositor less than 1.5 x length of post petiolar region of metasoma; mid anterior margin of pronotum without v-shaped suture or carinae 3

3. Apex of scutellum not extended beyond metanotum; pronotum medially divided, lateral margin usually with edge and row of spine-like setae; inner scape transversely striate . . . . *bifasciatipennis* group

- Apex of scutellum extended beyond metanotum; pronotum entire, not divided medially, laterally not margined and without row of spine-like setae; inner scape longitudinally striate . . . . *pecki* group

Platyfrons n. genus

(Figs. 51, 100, 181-183)

Description: Female head in dorsal view short, 1.6 x broader than long (Fig. 181); vertex narrow, longitudinally, compressed forming narrow but blunt ridge dorsally; occiput rounded; eye ovate, moderately sized, sparsely pubescent, with tiny ommatidia; ocelli almost in straight line; supraorbital and transverse sutures not visible dorsally (Fig. 183); funicle 6-segmented, club 1-segmented; male flagellum ll-segmented; antenna inserted slightly above level of ventral margin of eye, nearly touching inner margin of eye (Fig. 183); flat area of frons twice as broad as long, extending far below antennal toruli; clypeus subtriangular, ventral margin medially incised; narrow elongate foveae below clypeal margin with large fovea between its margin and mandible; mandible tridentate; malar suture present; malar space 0.33 height of eye.

Mesosoma twice as long as wide; pronotum short, sharply sloping forward, posterior margin broadly concave; notauli complete; mesoscutum twice as long as pronotum (Fig. 185); axilla small, triangular; scutellum as long as posterior scutellum, separated by uniformly spaced transverse punctures; dorsellum of metanotum narrow, band-like; propodeum with "H" shaped carinae (Fig. 181); propodeal spiracle tiny, rounded, set on semicircular ridge enclosed by deep foveae next to anterior margin (Figs. 181, 182); legs long and slim: tarsi 4-segmented; hind coxa elongate, smooth; fore wing long and spatulate, base narrow and parallel (Fig. 100); submarginal vein 3 x length of marginal vein; postmarginal ciliae 0.33 width of wing.

Metasomal petiole narrow (Fig. 181), cylindrical with transverse ridge-like sculpture, longer than hind coxa; post petiolar region of metasoma short, ovate in dorsal view (Fig. 181), anterior margin nearly perpendicular to longitudinal axis of metasoma (Fig. 182), 0.66 length of post petiolar region of metasoma; metasomal tergum 2 long, as long as terga 3 to 6 combined; posterior end of post petiolar region of metasoma abruptly tapered apically; ovipositor hidden.

Type-species: *Platyfrons helavai* n. sp. Present designation.

Distribution: Brazil, Colombia, Costa Rica, Ecuador, Venezuela.

Diagnosis: Four-segmented tarsi; metasoma petiolate; funicle 6-segmented; club 1-segmented; male flagellum 11-segmented; mandible tridentate; occiput rounded; eye small, with tiny ommatidia; area of face flattened medially (Fig. 183); propodeal carinae forming "H" like pattern (Fig. 181).

Discussion: The word *platys* means flat; *frons* means forehead and refers to the flattened frons. The gender is masculine.

List of species from the New World:
helavai n. sp.

Formicomymar n. genus

(Figs. 52, 96, 188-191)

Description: Head large with expanded genae (Figs. 188, 189), in dorsal view transverse, 1.6 x broader than long (Fig. 190); vertex subrectangular, occiput rounded, eye semiovate, moderately sized, sparsely pubescent, with tiny ommatidia; ocelli arranged in acute triangle (Fig. 190); supraorbital and transverse suture distinct; funicle 6-segmented (Fig. 52); club ellipsoidal shaped; antenna inserted midway between transverse suture and posterior margin of clypeus, nearly touching inner margin of eyes; frons concave, deep vertical trough extending from transverse frontal carina to posterior margin of clypeus along inner margin of toruli; clypeus subrectangular, anterior margin straight; lateral anterior corner of mouth slightly depressed; mandible tridentate; malar suture present; malar space about 0.5 height of eye.

Mesosoma twice as long as wide; pronotum short, 2.5 x broader than long; pronotum with median carina and nearly as long as mesoscutum (Fig. 188), anterior margin of pronotum sloping forward, posterior margin convex, and hind margin broadly concave; notauli distinct, complete (Fig. 189); mesoscutum 1.6 x longer than pronotum; axilla small, subtriangular, with single seta; anterior scutellum rectangular, as long as posterior scutellum; posterior scutellum divided by transverse row of minute punctures; dorsellem of metanotum narrow, band-like, hidden under overhanging margin of posterior scutellum (Fig. 191); median area of propodeum divided by longitudinal trough, with lateral margins carinate, concave, bracket-like in shape, area between carinae with few irregular longitudinal carinulae (Fig. 191); lateral margin of propodeum elevated above median area; propodeal spiracle stalked near anterior margin (Figs. 189, 191); fore and hind wings brachypterous (Fig. 96); tarsi 4-segmented.

Metasoma petiolate; petiole slightly concave dorsoventrally at anterior end, posteriorly tapering narrowly into subcylindrical shape, shorter than hind coxa, posterior end wider than anterior end; post petiolar region of metasoma ovate, twice as long as wide, twice as long as mesosoma; metasomal tergum 2, 4-5 x as long as other terga (Fig. 189); ovipositor extended just beyond apex of post petiolar region of metasoma.

Type-species: *Formicomymar venezuelaensis* n. sp. Present designation.

Distribution: Venezuela.

Diagnosis: Head large with expanded genae (Figs. 188, 189); mid propodeal area with many vertical, longitudinal carinae (Fig. 191); posterior scutellum longitudinally microstriate; metasomal tergum 2 longest, about as long as combined length of metasomal terga 3-6 (Fig. 189); wings brachypterous (Fig. 96).

Discussion: The word *formica* refers to the general aspect of this genus which resembles a formicine ant.

The gender of *Formicomymar* is neuter.

The male is unknown.

List of species from the New World:
Formicomymar venezuelaensis n. sp.

Genus *Polynema* Haliday

(Figs. 53, 102, 184-187)

Polynema Haliday, 1833: 269, 347.
Type-species: *Ichneumon ovulorum* Linnaeus. Designated by Westwood. Deposited in NHID. (not examined).
Eutriche Nees, 1834: 196
Type-species: *Eutriche gracilis* Nees. Lectotype designated by Graham (1973). Deposited in OXUM. (not examined).
Doriclytus Foerster, 1847: 226.

Type-species: *Doriclytus vitripennis* Foerster. Monobasic. Deposited in NHMW. (not examined).

Callitriche Agassiz, 1847: 173. Emendation. Preoccupied.

Cosmocoma Forster, 1856: 117. Unnecessary new name.

Maidliella Soyka, 1946: 178.

Type-species: *Maidliella neofuscipes* Soyka. By original designation. Deposited in NHMW. (not examined).

Novickyella Soyka, 1946: 179.

Type-species: *Polynema gracilior* Soyka. By original designation. Deposited in NHMW. (not examined).

Barypolynema Ogloblin, 1946: 282.

Type-species: *Barypolynema reticulatum* Ogloblin. By original, designation. Deposited in MLPA. (examined).

Xenopolynema Ogloblin, 1960: 9. N. Syn.

Type-species: *Xenopolynema areolatum* Ogloblin. By original designation. Deposited in MLPA. (not examined).

Distribution: Worldwide.

Diagnosis: Four-segmented tarsi; metasoma petiolate; female funicle 6-segmented; club 1-segmented (Fig. 53); male flagellum 11-segmented; marginal and stigmal veins confluent (Fig. 102); antennal radicula and scape not divided (Fig. 53); 2 propodeal setae near posterior margin and close to petiolar insertion; pronotum usually divided (Fig. 184).

Important references: Annecke and Doutt (1961); Soyka (1956); Ogloblin (1960a); Graham (1973); Schauff (1984).

Discussion: The only character separating *Xenopolynema* Ogloblin and *Polynema* Haliday is the elongate process of the pronotum on the posterior lateral margin. Otherwise, they are more or less structurally similar. Therefore, I am placing *Xenopolynema* in synonymy with *Polynema*.

At this stage, the taxonomic problem of the *Polynema* complex is difficult to resolve. Graham (1982) commented that the members of the genus *Polynema* varied in proportions of the scutellum, the presence or absence of a transverse row of punctures on the postscutellum and the presence or absence of the propodeal median carina. Schauff (1984) is correct in stating that "until the species can be carefully revised, I believed it unwise to further complicate the taxonomy of the genus by splitting off groups of species based on variable characters." He added "as in some other genera

Polynema is plagued by type problems. Acceptance of the currently recognized type of the genus would result in a departure from the currently established concept of *Polynema* and result in considerable taxonomic confusion."

List of species from the New World:
albicoxa Ashmead, 1900: 266.
areolatum (Ogloblin), 1960*a*: 9. *N. Comb.*
aspidioti Girault, 1911*a*: 358.
bimaculatipenne Girault, 1911: 304.
boreum Girault, 1916*c*: 8.
caesariatipenne Girault, 1911*b*: 305.
carbonelli (Ogloblin), 1963: 5. *N. Comb.*
ciliatum (Say), 1828: 18.
consobrinus Girault, 1911*b*: 308, 309.
enchenopae Girault, 1911*e*: 15.
eutettixi Girault, 1916*b*: 299..
florum Girault, 1929*a*: 18.
fuscipes Haliday, 1833: 348.
giraulti Perkins, 1912: 24.
grenadensis Ashmead, 1900: 266.
graculus Girault, 1911*b*: 308.
haitiana Dozier, 1932: 85.
howardii (Ashmead), 1881: 371.
imitatrix Gahan, 1918: 24.
longipes (Ashmead), 1887: 192.
luteolum (Ogloblin), 1960*a*: 73. *N. Comb.*
maculipes (Ashmead), 1887: 194.
magniceps Ashmead, 1900: 265.
marilandicum Girault, 1917*c*: 2.
medicae Annecke and Doutt, 1961: 57.
mymaripenne Dozier, 1933: 96.
nativum Girault, 1929*a*: 19.
needhami Ashmead, 1900: 616.
orientalis (Ogloblin), 1963*b*: 8. *N. Comb.*
pallidiventris (Ogloblin), 1960*a*: 71. *N. Comb.*
phaseoli Dozier, 1932: 84.
picipes Girault, 1905*b*: 91.
polychromum (Ogloblin), 1960*a*: 71. *N. Comb.*
pratensiphagum Walley, 1929: 193.
regina Girault, 1912*c*: 24.
reticulatum (Ogloblin), 1946: 282. *N. Comb.*
saga (Girault), 1911*b*: 296. *N. Comb.*

sibylla Girault, 1911*b*: 311.
striaticorne Girault, 1911*e*: 12.
succineum (Ogloblin), 1960*a*: 2. *N. Comb.*
zetes Girault, 1911*b*: 314.

Description of new species

Myrmecomymar masneri n. sp.

(Figs. 16, 109-111)

Discription: Female: Length 0.6 mm. Body generally yellowish brown; eyes whitish; antenna dark brown except club yellowish brown; fore and mid coxa dark brown; hind coxa yellowish; femora, tibiae and tarsi partially brownish and yellowish brown; apical margins of terga dark brown.

Head as wide as mesosoma (Fig. 109); supraorbital and transverse suture narrow (Figs. 110, 111); area between toruli flat, smooth to alutaceous; entire head smooth with dense setae on vertex (Figs. 110, 111); occipital suture present; antenna 8-segmented; scape and pedicel smooth; scape spindle shaped (Fig. 111); length of antennal segments in ratio 14: 5 : 4: 3: 3: 3: 10 (Fig. 16).

Mesosoma 0.66 length of metasoma; pronotum broadly bell-shaped, about length of mesoscutum, smooth and without hairs (Figs. 109); scutellum slightly shorter than mesoscutum, smooth and bare; pro- and mesopleura smooth; mesopleuron dorsoventrally elongate and ovate, broader and longer than propleuron in lateral view (Fig. 110); propodeum slightly concave medially with fine carinulae near basal area and many short setae; propodeal spiracle tiny, often unnoticeable; propodeal carina thin and short; wing apterous.

Post petiolar region of metasoma ovate (Fig. 110), flattened laterally (Fig. 109); metasomal terga 2 and 3 fused; hind margin of tergum 2 deep, broadly V-shaped margin (Fig. 109); length ratio of terga as follows: 15: 5: 2: 1: 3; pygostyle with 2 pairs of long bristles, 1 pair of short bristles, about 0.5 length of other bristles.

Male: 0.5 mm. Body generally brownish to dark brown; scape brownish; pedicel pale; flagellum dark brown; vertex dark brown, legs except coxae light brown; metasomal petiole and underside of metasoma pale to yellowish brown, apical 0.33 dark brown; wings hyaline, apical margin beyond venation with dark linear line.

Head similar to female; ocelli without well defined stemmaticum; "neck region" or cervical sclerite of propleuron membraneous; eyes large, with tiny ommatidia numbering 55-60; antennal scape flattened, linear; length of antennal segments in ratio 10: 5: 7: 8: 9: 9: 9: 9: 9: 9: 9: 9: 8; ocelli tiny, POL:3, LOL:3, OOL:4; occiput narrow and carinated.

Mesosoma 1.5 x longer than broad, broadly concave; pronotum short, anterior margin nearly vertical in lateral view, about twice as long as wide, slightly less than 0.5 length of mesoscutum (6:10); mesoscutum as long as wide, nearly twice as long as scutullum (10:6); axilla triangular, apices narrowly ajoined at mid mesosoma; posterior scutellum narrow, about 0.33 length of anterior scutellum; posterior margin broadly rounded; propodeum 0.5 as long as wide, smooth; metasomal petiole narrow anteriorly, posterior end 1.5 x wider than anterior end, twice as long as broad, with thin longitudinal carina on dorsal and lateral margins; fore wing lanceolate, 5.5 x longer than wide, apex rounded; venation 0.66 length of fore wing with single distal macrochaeta; marginal ciliae 1.6 x longer than width of wing; apical 0.25 of disc sparsely hairy.

Post petiolar region of metasoma slightly longer than broad (15:13), shorter than mesosoma (15:25); apical margin of metasomal tergum 2 slightly invaginated medially; length ratio of metasomal terga as follows: 10: 5: 5: 2: 1: 1.

Types: Holotype, female, CANADA; Ontario, Spencerville, 26.VIII-4.IX.79, L. Masner, pan trap. Allotype, male, CANADA; Ontario, Spencerville, 14-28.VIII.81, S. J. Miller (CNC No. 18471). Paratypes, 42 females, same data as holotype; 12 males, CANADA; Ontario, Mer Bleu, 14-28.VIII.81, S. J. Miller; 10 males, CANADA, Ontario, Mer Bleu, 16-22.VIII. 82, H. Goulet.

Discussion: I am pleased to name this species after my colleague, Dr. Lubomir Masner.

Diagnosis: The neotropical forms can easily separated from *M. masneri* by the 5-segmented funicle with segments 1-2 ring-like, vertex of head without hairs and the propodeum smooth.

Hadromymar masoni n. sp.

(Figs. 17, 61, 131)

Discription: Female: Length 2.0 mm. Body black; eyes whitish; antennal scape and pedicel yellowish to yellowish brown; funicle segments black; club brownish; legs yellowish to yellowish brown, apical tarsus black; laminae on propodeum whitish.

Head as wide as mesosoma; eyes large; vertex elevated above frons, transverse and supraorbital sutures wide; post frontal suture absent; ocelli in ratio (LOL) 1, (POL) 2, (OOL) 0.5; margin of toruli distinctly carinate; entire head smooth; transverse suture extending mid distance of eye length; scape smooth, narrow and flattened on both sides; length of antennal segments in ratio 11: 5: 3: 1: 4: 5: 4: 3: 16 (Fig. 17).

Mesosoma about twice as long as post petiolar region; pronotum short, anterior margin broadly rounded; mesoscutum concave; anterior scutellum short, transverse; posterior scutellum subrectangular, apex truncate; propodeum reticulate, area adjacent to laminate median carinae smooth (Fig. 131); plicae absent.

Post petiolar region of metasoma short, spade-like, flattened dorsoventrally, slightly wider than long (18:15), polished; metasomal tergum 2 nearly covering entire post petiolar region of metasoma; length of metasomal terga in ratio 12: 3: 3; metasomal terga 3-6 telescoped into post petiolar region of metasoma.

Male: Unknown.

Types: Holotype, female, COSTA RICA, Punta Arenas, Monteverde Res., Cloud Forest, 1500 m., II.80, W.R.M. Mason (CNC No. 18472). Paratypes, female, ECUADOR, Napo, Sacha, 5.III.83, L. Huggert; female, PANAMA, Chiriqui Prov., 15 Km N.W. Hato del Volcan, 1200 m, 24-31.V.77, Peck and Howden.

Discussion: I am pleased to name the type species after my colleague, Dr. W.R.M. Mason.

Gonatocerus helavai n. sp.

(Figs. 55, 67, 122-124)

Description: Male: Length 1.4 mm. Head yellowish brown; mesosoma brown to dark brown; scape and pedicel yellowish brown; flagellum and rami brownish to dark brown; fore coxa and underside of pronotum yellowish brown; pleuron dark brown; fore and mid legs yellowish brown except mid coxa dark brown; hind legs brown to dark brown except trochanter; anterior ventral margin of femur and apical 3 tarsi yellowish brown; fore wing with 2 faint, brownish, broad vertical bands.

Head wider than mesosoma; postgena bulging ventro-posteriorly (Fig. 123); ocelli in ratio (LOL) 2, (POL) 3 (OOL) 1; frons forming broad plate between transverse suture and toruli; broad V-shaped subantennal suture extending from toruli to clypeal margin; face smooth, posterior inner lateral margin of frontal suture with 3 short setae arranged in vertical line; antennal scape thick, short and ovate; pedicel slightly shorter than funicle 1; length of antennal segments in ratio 4: 2: 2: 3: 3: 2: 2: 3: 4: 12: 6: 4: 6; length of rami in ratio 24: 24: 18: 18 (Fig. 55).

Mesosoma long, 1.6 x longer than post petiolar region of metasoma(Fig. 122); pronotum, mesonotum and scutellum microreticulate; mesothoracic spiracle stalked, minutely ovate in transverse furrow along anterior margin (Fig. 123); propodeum smooth, narrow with longitudinal furrows beside median carina (Fig. 122); plicae extending from coxal rim to near propodeal spiracle; surface area beyond plicae rugulose-reticulate; hind coxa as long as petiole, microreticulate to transversely rugulose toward apex (Fig. 122); base of fore wing bare to just slightly beyond marginal vein; remainder of disc pubescent; marginal cilia distinct; cilia on posterior margin slightly longer than anterior margin (Fig. 67); stigmal vein curved upward toward anterior margin; hind wing narrow, anterior and posterior margins parallel, apex sharply acuminate.

Metasomal tergum 2 of post petiolar region of metasoma longest, hind margin emarginate medially (Fig. 122); length of metasomal terga as follows: 4: 1: 2: 3: 2: 2: pygostyle with 1 long seta and pair of short setae, subequal in length.

Female: Unknown.

Types: Holotype, male, PANAMA, Cerro Campana, 8°40'N., 19°50'W., 850 m, 7-14.V.75, J. Helava (CNC No. 18473). Paratype, male, PANAMA, Chiriqui Prov., 15 km N.W. Hato del Volcan, 1200 m, 24-31.V.1977, S. Peck and H. Howden.

Diagnosis: This species differs from all other members of *Gonatocerus* by having the combination of characters: antenna with 4 rami (Fig. 54), propodeum with elongate ovate median carina and the paramedial foveae of propodeum reaching about midway between posterior to anterior margins (Fig. 122).

Discussion: This species belongs to *ater* species-group. I am delighted to name the species after J. Helava.

Gonatocerus masneri n. sp.

(Figs. 20, 69, 125-127)

Discription: Female: Length 1.8 mm. Body pale to yellowish; antennal scape and pedicel yellowish brown; flagellum dark brown; transverse and supraorbital sutures dark; propodeum yellowish brown; post petiolar region of metasoma brownish medially; tibia of hind leg dark brown.

Head as wide as mesosoma (Fig. 125), vertex smooth to alutaceous, subrectangular in dorsal view; frons subrectangular, flattened, face smooth, lower part of face concave (Fig. 127); ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; antennal funicle 8-segmented; scape subcylindrical, narrow and long; radicula 0.33 length of scape; pedicel short, distinctly shorter than funicle 1; length of antenna including radicula in ratio 12: 3: 7: 4: 3: 5: 4: 4: 4: 3: 12 (Fig. 20).

Mesosoma 1.6 x longer than post petiolar region of metasoma, generally microrecticulate; length of pronotum, mesoscutum, scutellum and propodeum in ratio 6: 5: 7: 8 (Fig. 125); hind margin of pronotum with 4 setae widely separated from each other; 1 seta on each anterolateral corner of mesoscutum and scutellum: propodeum densely punctured, plicae with rows of punctures (Fig. 125); propodeal spiracle small, situated in horizontal furrow along anterior margin; hind coxa elongate ovate, about 0.5 length of metasomal petiole; 3 setae widely separated from each other on posterior margin of coxa; base of fore wing bare to marginal vein, remainder of disc pubescent, marginal cilia short (Fig. 69); hind wing narrow, anterior and posterior margins parallel, apex sharply accuminate.

Metasomal petiole finely sculptured (Fig. 125); post petiolar region of metasoma diamond shaped as seen in lateral view (Fig. 125); metasomal tergum 2 nearly 0.5 length of post petiolar region of metasoma, hind margin emarginate medially; metasomal tergum 3 slightly longer than 4; metasomal tergum 4 slightly longer than 5; metasomal terga 5-7 subequal in length.

Male: Length 1.7 mm. Similar to female except as follows: fore wing with broad faint brown band; hind tibia light brown; antenna filiform; flagellum compressed, horizontally striate, distal segments long and broad, with each segment gradually becoming narrower toward apical segment; apical segment subcylindrical and acuminate; length of antennal segments in ratio 4: 2: 6: 8: 8: 6: 7: 7: 7:.7: 7: 6: 7; post petiolar region of metasoma small, about 2 x as long as head.

Types: Holotype, female, REPUBLIC DOMINICA, El Rio (La Vega), 17.III.78, L. Masner, 1000 m, sweeping. Allotype, male, REPUBLIC DOMINICA, Santo Domingo, 14.VIII.78, L. Masner (CNC No. 18474).

Diagnosis: This species closely related to *G. morrilli* Howard but differs in having the petiole slim and cylindrical, 8 x longer than wide (Fig. 125), propodeum with subparallel rows of punctures and irregular rows of similar sized punctures on lateral margin (Figs. 125, 126) and the post petiolar region of metasoma diamond shaped as seen in lateral view (Fig. 125).

Discussion: I am pleased to name this species in honor of my colleague Dr. Lubomir Masner.

Anagroidea boweni n. sp.

(Figs. 24, 81, 103, 132, 133)

Discription: Female: Length 0.5 mm. Body dark brown; scape and pronotum yellowish brown; legs including coxae yellowish; tarsi darker; wings hyaline; venation dark.

Head narrower than mesosoma (Fig. 132); vertex coarsely reticulate (Fig. 132); supraorbital suture narrow, transverse suture wide; ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; frontal carina extending from inner margin of eye to oral cavity; malar suture absent; face concave, smooth, divided medially by a thin carina; eye margin and gena coarsely reticulate; mandible broad at base, gradually narrowing toward apex, about twice as long as wide; occipital suture present; supraorbital suture extending to occipital foramen; length of antennal segments excluding radicula in ratio 15: 10: 7: 1: 3: 3: 3: 3: 3: 16 (Fig. 24).

Pronotum short, nearly in vertical position anteriorly, hind margin broadly inverted, V-shaped, reticulate posteriorly; mesoscutum longer than scutellum, posterior scutellum coarsely reticulate; axilla small, subtriangular; propodeum reticulate to broadly reticulate, nearly perpendicular in lateral view, with longitudial reticulations; plicae present; propodeal spiracle tiny, distance to anterior margin about 1.5 x its diameter (Fig. 133); hind coxae elongate ovate, as long as petiole; fore wing long, spatulate, 3 x longer than wide (Fig. 81); submarginal vein 4.5 x longer than marginal; marginal cilia short, about 0.25 length of broadest part of wing, pubescent; hind wing narrow, anterior and posterior margins subparallel, apex pointed, setae on hind margin longer than width of wing (Fig. 103).

Metasomal petiole as wide as long; post petiolar region of metasoma shorter than mesosoma; metasomal tergum 2 longest, about 0.5 length of post petiolar region, hind margin broadly emarginate; length of metasomal terga in ratio 10: 4: 6: 0.5; apical 2 terga telescoped into post petiolar region of metasoma.

Male: Length 0.5 mm. Similar to female except as follows: body brownish, post petiolar region dark brown; flagellum 11-segmented, filiform; length of antennal segments including radicula in ratio 3: 13: 6: 6: 6: 6: 6: 6: 6: 6: 5: 5: 5.

Types: Holotype, female, UNITED STATES, Florida, Jacksonville, 13.X.80, L. Masner and B. Bowen (CNC No. 18475). Allotype, male, UNITED STATES, Florida, Dade Co., Palma Vista Hammock Everglades N. P., 27.VIII.65, W. Suter. Paratype: female, UNITED STATES, Florida, Collier Co., Collier Seminole State Park, 25-26.V.79, N.F. Johnson; female, UNITED STATES, Florida, Alachua Co., Gainesville, 10-19.IV.86, M. Sharkey, pan trap.

Diagnosis: Based on the Viggiani 1973 redescription of the type-species *Anagroidea dubia* Girault, *A. boweni* differs from *A. dubia* by the stigma truncate, the submarginal vein without setae (Fig. 81), the basal metasomal tergum at petiolar insertion not carinate, the posterior and anterior margins of hind wing more or less parallel, the apex pointed (Fig. 103) and the head and mesosoma coarsely sculptured.

Discussion: I am pleased to name this species after Mr. Bruce Bowen, formally an assistant in Biosystematics Research Institute, Hymenoptera unit.

Caenomymar howdeni n. sp.

(Figs. 31, 84)

Discription: Female: Length 0.9 mm. Body generally brownish; head dark brown; antennal scape yellowish brown, flagellum dark brown except club whitish; pronotum, fore leg, scutellum, metasomal terga 5-6, and sterna 4-5 all yellowish brown, meso- and metapleura including coxae dark brown; apical 0.33 of post petiolar region of metasoma dark brown.

Head wider than mesosoma, ovate in frontal view; vertex rectangular, smooth; frons rectangular, flattened, angulate in lateral view; distance of ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; face finely reticulate, 3 setae along outer margin of subantennal suture; margin of face truncate in frontal view; clypeus narrowly rectangular; mandible exposed ventrally beyond oral cavity; malar space with 2 long setae arranged vertically along axis of head; antennal scape narrowly elongate, extending to vertex; pedicel twice as broad as funicle 1, funicle segments cylindrical; length of antenna in ratio 15: 6: 6: 15: 15: 8: 10: 6: 15 (Fig. 31).

Mesosoma shorter than post petiolar region of metasoma, smooth; pronotum short, sharply arched forward with 2 long setae laterally; paramedial row of fine punctures on mesoscutum; length of mesoscutum, anterior scutellum, posterior scutellum and propodeum in ratio 14: 6: 9: 5; single seta on posterolateral margin of mesoscutum; lateral areas of propodeum beyond paramedial suture smooth with single seta; hind coxa smooth with dorsal keel; base of fore wing beyond marginal vein, bare, remainder of disc pubescent (Fig. 84); marginal cilia 1.6-1.7 x longer than width of wing; apex of wing acuminate; hind wing long, narrow, parallel sided; hind marginal cilia 5 x width of wing, apex sharply accuminate.

Metasomal petiole as long as hind coxa; metasomal tergum 2 long, 0.33 length of basal metasomal tergum; length of metasomal terga in ratio, 1: 3: 3: 1: 0.5: 0.5.

Male: Unknown.

Types: Holotype, female, PANAMA, Chiriqui Prov., 15 km N.W. Hato del Volcan, 1200 m, 24-31.V.77, S. Peck and H. Howden (CNC No. 18476). Paratype: female, same data as holotype.

Discussion: I am pleased to name this species after Dr. H.F. Howden.

Notomymar masneri n. sp.

(Figs. 26, 144, 145)

Discription: Female: Length 1.2 mm. Body brownish to yellowish brown; pedicel and club segments, apical margins of metasomal terga and tarsi all pale.

Head transverse in dorsal view, 2.3 x wider than long (Fig. 144), subrectangular, broader than mesosoma; vertex subtriangular, concave, occiput rounded; eye moderately sized, ovate, sparsely hairy, ommatidia minute (Fig. 144); ocelli arranged in acute triangle; distance of ocelli in ratio (LOL) 3, (POL) 7, (OOL) 3 (Fig. 144); transverse and supraorbital sutures not visible from above, folded along inner margin; funicle 6-segmented; club 3-segmented; antenna inserted about middle of face; scape narrow and long, extending beyond anterior ocellus; funicular segments 1-3 cylindrical; club 3-segmented; antennal segments including radicula in ratio 10: 6: 4: 5: 5: 4: 4: 4: 5 :4 :6 (Fig. 26); toruli deep and large; frons deeply concave; face sloping ventrally about 45° degrees in lateral view; median area of face with deep rectangular depression; clypeus tiny, subrectangular; mandible in form of "L", narrow at base, apex with 1 large tooth and 4 tiny teeth; malar suture present; malar space about 0.5 height of eye.

Mesosoma squat, about 1.5 x as long as wide (Fig. 144); pronotum short, with subrectangular plate medially, mesothoracic spiracle sessile at postlateral margin; mesoscutum about 0.5 as wide as long, slightly shorter than scutellum; notauli converging, deep; anterior scutellum flattened, rectangular (Fig. 144); posterior scutellum rectangular, somewhat flattened, slightly longer than scutellum (Fig. 145); axilla small, triangular; dorsellum of metanotum reduced to tiny, narrow sclerite, just above propodeal spiracle; propodeum sloping diagonally in lateral view, basal part narrow and tapering anteriorly; lateral area of propodeum broadly expanded, median area short, posterior margin of petiolar insertion broadly concave (Fig. 144); plicae absent; propodeal spiracle narrowly ovate, separated from anterior margin of propodeum by its diameter (Fig. 145); legs slim and long; fore and mid coxae subequal in length, ovate; hind coxa narrow and long, longer than mid coxa.

Posterior margin of basal metasomal tergum V-shaped; basal tergum about 0.5 length of tergum 4; apex of post petiolar region of metasoma accuminate; length of metasomal terga in ratio 1: 2: 2: 2: 3: 1; ovipositor extending ventrally from middle to apex of metasoma.

Male: Unknown.

Types: Holotype, female, ECUADOR, Napo, Quito-Baeza Rd., 4100 m, 10.II.82, L. Masner (CNC No. 18477). Paratypes: 5 females, same data as holotype.

Diagnosis: This species is closely related to *Notomymar aptenosoma* Doutt and Yoshimoto but differs in having the following characters: head transverse (Fig. 144); ocelli large; antennal funicle segments 1-3 cylindrical shaped (Fig. 26); pronotum with rectangular plate medially; and ovipositor extending ventrally from middle to apex of metasoma.

Discussion: I am pleased to name this species after Dr. Lubomir Masner.

Ptilomymar magnificum n. sp.

(Figs. 35, 76, 139-143)

Discription: Female: Length 0.9 mm. Body fuscous to black; antennal scape and pedicel slightly lighter in color; fore coxa and trochanter brownish yellow; tergum 6 with transparent area laterally; laminae whitish; fore wing with broad dark band below marginal vein.

Head in dorsal view, 1.5 x wider than long, subrounded, as wide as mesosoma (Fig. 139); vertex concave, horizontally striate; occipital area broad, with suture sharply margined (Fig. 139); eyes small, subcrescentic, bare (Fig. 141), widely separated by concave vertex; mandible tridentate; frons subrectangular, smooth; transverse and supraorbital sutures not visible dorsally; posterior eye margin converging forward; distance between ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; malar space slightly more than 0.5 height of eye (5:8); postgena as wide as width of eye with lateral carina (Fig. 141); antenna inserted near transverse suture (Fig. 140); scape and radicula confluent, narrow and elongate, apical 0.33 slightly swollen, extending beyond vertex; pedicel ovate, slightly compressed, longer than funicle 1; club ovate, 4 x wider than funicle 1; antennal segments including radicula in ratio 11: 5: 1: 3: 3: 3: 3: 3: 3: 3: 12 (Fig. 35).

Mesosoma high and short, 1.6 x longer than wide, 1.3 x length of post petiolar region of metasoma, alutaceous to smooth, posterior 0.33 longitudinally microstriate (Fig. 141); pronotum finely, broadly reticulate to smooth, short, slightly visible in dorsal view, posterior margin broadly convex; mesothoracic spiracle stalked as in *Neomymar* Crawford at posterior dorsal margin of pronotum (Fig. 143); notauli absent (Fig. 139); prepectus triangular shape, near to anterio-posterior margin of pronotum (Fig. 141); mesoscutum 1.5 x longer than scutellum; scutellum longer than wide, micro-striate diagonally from median area with pair of fine setae anteriorly; axilla small, triangular, situated laterad of anterior scutellum (Fig. 142); posterior scutellum distinct, longitudinally striate, about 0.33 of length anterior scutellum; metanotum small, flattened, semiovate; propodeum rounded in lateral view; laminate shields subcrescentic, arranged paramedially, narrow anteriorly, broader toward petiolar insertion (Fig. 142); plicae absent; propodeal spiracle rounded, near anterolateral margin(Fig. 142); callus with a branched spiracular setae (Fig. 142); mesopleura microstriate horizontally; hind coxa smooth and polished with dorsal longitudinal keel; legs slim and long hind coxa cylindrically elongate, twice as long as metasomal petiole; fore wing narrow, long, spatulate (Fig. 76); submarginal vein long, 4 x length of marginal vein (20:5); marginal vein thick and short, twice as long as thick with single long seta and 4-5 short hairs; marginal cilia 1.5 x width of fore wing; hind wing extending full length of fore wing (Fig. 76).

Metasomal petiole narrow, cylindrical, about 3 x longer than wide, with longitudinal carinulae; post petiolar region of metasoma broad, elongate ovate, compressed (Fig. 140); metasomal tergum 3 longest, 0.6 length of post petiolar region of metasoma (Fig. 140); longitudinal carinulae 0.33 base of tergum 3; second set of laminae extended from petiolar insertion to 0.66 height of first laminae and joined to base of propodeum; single laminate shield extended from sternite to underside and apex of metasomal petiole; metasomal tergum 2, 20 x length of tergum 4; metasomal tergum 5, 7 x length of 3; metasomal terga 6-7 fused, subequal in length, about 0.5 length of tergum 5; metasomal terga 5-7 sometimes retracted into post petiolar region of metasoma; gonostyli each with 3 subequally short hairs.

Male: Length 0.5 mm; similar to female except as follows: anterior margin of fore wing slightly curved inward toward disc, subparallel; flagellum 11-segmented; radicula tiny, distinct, broader than long; flagellum smooth, with scattered fine hairs, without sensory ridges and apex of each flagellar segment with two tiny spine-like setae; first flagellar segment tiny, subcylindrical, anellus-like; length of antenna in ratio 8: 3: 1: 3.5: 3.5: 3.5: 3.5: 3.5: 4: 5: 5: 5: 5; post petiolar region of metasoma slightly compressed, elongate ovate, in lateral view; strong laminae evident on basal metasomal tergum; propodeum with short stubby laminae.

Types: Holotype, female, CANADA: Ontario, Oxford Mills, 21.VIII.78, N. Tulsiram (CNC No. 18478). Allotype, male, CANADA: Ontario, Spencerville, 12-22.VIII.79, L. Masner, pan trap. Paratypes, female, CANADA, Ontario, Oxford Mills, 31.VIII.78, N. Tulsiram, pan trap; male, female, CANADA, Ontario, Spencerville, 12-22.VIII.79, 18-22.VIII.79, L. Masner, pan trap; female, CANADA, Ontario, Marmora, 18.IX.52, E.H.N. Smith.

Diagnosis: *Ptilomymar magnificum* is close to *P. rete* Annecke and Doutt from Mexico. It resembles *P. orientalis* Taguichi and *P. besucheti* Viggiani by the strongly developed laminae on the first tergite of metasoma and *P. rete* and *besucheti* by the branched spiracular setae of propodeum but differs from the latter 2 species by having the following characters: large, subrectangular vertex extended beyond transverse and supraorbital sutures; large subrectangular pronotal collar extended beyond lateral suture of pronotum (Figs. 139, 141), similar to Eucoilidae (Cynipoidea); scutellum striate with hind margin nearly straight (Fig. 142); metanotum large, slightly less than 0.5 length of scutellum; metapleuron fused together with propodeum to form single plate (Fig. 141); basal metasomal tergum 2 short, positioned between dorsal laminae, shorter than tergum 3; metasomal tergum 3 nearly as long as gaster. *P. orientalis* differs from *manificum* by the short and narrow vertex, the pronotal plate absent, the propodeal setae not branched and the propodeum with subparallel carinae.

Eustochus nearcticus n. sp.

(Fig. 36, 77, 147, 148)

Description: Female: Length 0.7 mm. Body dark brown; scape yellowish, funicle segments 1-4 brownish; funicle segments 5-6 and club segments dark brown; legs including coxae yellow to yellowish brown except apical tarsomere darker.

Vertex of head in dorsal view rectangular, convex, as wide as mesosoma, twice as broad as long (Fig. 147), coarsely reticulate (Fig. 147); eyes small with 30-32 ommatidia (Fig. 147); ocelli small, distance between ocelli in ratio (LOL) 2.5, (POL) 4, (OOL) 1.5; occiput broadly concave, with suture laterally margined; mandible bidentate; frons and face forming large subrectangular plate, concave, smooth except along margins where finely reticulate; transverse and supraorbital sutures narrow and elongate; junction of transverse and superorbital sutures with projection-like structure; malar space 0.5 height of eye; postgena as wide as width of eye; funicle 6-segmented; club ellipsoidal shaped, 2-segmented; antenna inserted slightly below transverse suture, scape spindle-shaped, narrower at both ends, apex extending beyond vertex (Fig. 36). with rasp-like scale; radicula short, separated; pedicel elongate, about 2 x wider at apex than at base; length of antennal segments including radicula in ratio, 6: 6: 4: 4: 3: 3: 3: 3: 5: 6 (Fig. 36).

Pronotum narrow, coarsely reticulate, hardly visible in dorsal or lateral view (Fig. 147); mesothoracic spiracle stalked at posterior margin of pronotum; mesoscutum coarsely reticulate (Fig. 147) with deep channel-like notauli; median area of transscutal suture with narrow transverse fovea; scutellum rectangular, shorter than mesoscutum, about twice as long as postscutellum, finely reticulate; axilla small, triangular, situated laterad of anterior scutellum posterior-laterad with 2 deep pits; posterior scutellum distinct; frenal groove indicated by row of large pits; dorsellum of metanotum band-like, posterior margin straight (Fig. 148); propodeum narrow posteriorly, as long as length of scutellum (Figs. 147, 148), posterior scutellum and metanotum combined; anterior half of propodeum finely reticulate, posterior half with scattered small to large crater-like pits mixed with reticulation (Fig. 148); propodeal spiracle tiny, rounded, distance to anterior margin about 3 x its diameter; area above petiolar insertion raised into narrow ridge; plicae distinct at posterior margin (Fig. 148); legs slim, and long hind coxa coarsely reticulate; hind tibia about twice as long as mid tibia; fore wing narrow at base and ellipsoidal, submarginal vein as long as marginal (Fig. 77); longest marginal cilia about 0.5 width of fore wing; marginal vein thickened throughout; hind wing slender, parallel sided, extending 0.7 length of fore wing; apex acutely pointed.

Metasomal petiole long, hour-glass shaped, coarsely reticulate; post petiolar region of metasoma broad, smooth, compressed, ventrally keeled; metasomal tergum 2 longest, extending 0.75 length of post petiolar region of metasoma; metasomal tergum 3 as long as terga 4-6; metasomal tergum 7 about as long as terga 3 plus 4, lateral margin broadly concave; gonostyli large, with 2 long hairs; ovipositor issuing from base of post petiolar region of metasoma and extended slightly beyond apex.

Male: Unknown.

Types: Holotype, female, CANADA, Nova Scotia, Cape Breton Highlands National Park, Lone Shieling, 29-31.V.1983, L. Masner and H. Goulet (CNC No. 18479). Paratypes: 2 females, same locality as holotype, 6-7.VI.83, 29-31.V.83 L. Masner and H. Goulet; female, Mackenzies Mt. 25.VII.83, Y. Bousquet, P.G. 648864; female, British Columbia, Vancouver Is., Mesache Lake. VIII.84, Sharkey-Johnson, MT.

Diagnosis: This species resembles *E. besucheti* Bakkendorf but differs as follows: length ratio of antennal flagellum (Fig. 36); antennal club ellipsoidal; posterior scutellum distinct; crater-like pits on propodeum and pleura (Fig. 148); metasomal tergum 2, 0.75 length of post petiolar region of metasoma; ovipositor short, extended beyond apex.

Tanaomymar venezuelaensis n. sp.

(Figs. 37, 56, 78, 149)

Discription: Female: Length 3.0 mm. Body generally yellowish to yellowish brown; eyes dark; antenna yellowish brown; funicular segment 1 dark except apical 2 segments blackish; venation dark.
Head smooth in dorsal view, wider than mesosoma (ratio 1.5: 1.0); transverse and supraorbital sutures prominent; postfrontal suture absent; ocelli in ratio (LOL) 1, (POL) 1, (OOL) 1; toruli with distinct ring-like carina; antenna 9-segmented; funicle 6-segmented, apical 2 funicular segments club-like; club 1-segmented (Fig. 37);

radicula short, separated from scape by indistinct suture; inner side of scape with rasp-like scale; length of antennal segments including radicula in ratio 3: 1: 7: 10: 10: 5: 4: 6: 6 (Fig. 37).

Mesosoma about twice as long as post petiolar region of metasoma (Fig. 149); pronotum entire, elongate, narrowly tapered anteriorly (Fig. 149); anterior half micro-reticulate, posterior half smooth; mesoscutum elongate, finely reticulate, except anterior margin smooth; axilla not advanced to margin of anterior scutellum; mesothoracic spiracle stalked on postero-lateral margin of pronotum; scutellum slightly longer than wide (3.5: 3.0), concave with median longitudinal suture; posterior scutellum and dorsellum of metanotum subequal in length, strongly crescent-shaped; propodeum elongate, concave dorsally, nearly parallel sided, reticulate; median carina absent; propodeal spiracle adjacent to anterior margin; plicae absent; short nucha between coxae; fore wing long, spatulate (24: 5); area behind venation bare; venation about 0.2 length of wing; submarginal vein slightly longer than marginal; legs slim and long, fore femur curved; hind leg including coxa in ratio 3: 4: 4: (3: 0.6: 0.5: 0.5).

Metasomal petiole long and narrow, cylindrical, reticulate, about length of mesosoma (Fig. 149); post petiolar region of metasoma ellipsoidal in lateral view (Fig. 149); metasomal tergum 3 longest, about twice as long as tergum 2, smooth; length ratio of metasomal terga as follows: 5: 10: 5: 1: 1: 0.5; ovipositor slightly exserted beyond apex.

Male: Length 3.0 mm. Similar to female except as follows: body brownish to dark brown; antenna black except pedicel dark brown; frons and face yellowish brown; posterior half of pronotum, fore and mid legs yellowish brown; metasomal tergum 2 brown; terga 3-7 blackish; flagellum 11-segmented; scape small, flattened and ovate: pedicel shorter than scape; flagellar segment 1 subcylindrical; flagellar segments 2-4 elongate, ellipsodial, slightly compressed; segments 5-10 flattened laterally, broadly ovate, apical segment small, about as long as preceeding segment, ellipsoidal.

Types: Holotype, female, VENEZUELA, Merida, 1800 m, 10.V.81, swept, L. Masner (CNC No. 18480). Allotype, male, VENEZUELA, Merida, Merida City, 1800 m, 3.V.81, sweeping, L. Masner. Paratypes: female, male, VENEZUELA, Merida, Merida City, 1800 m, 6.V.81, L. Masner; male, same data as allotype.

The specific name refers to the type locality, Venezuela.

Distribution: Known only from Merida, Venezuela.

Diagnosis: This species is similar to *Tanaomymar mirum* Annecke and Doutt but differs in having the following characters: posterior half of pronotum microreticulate; scutellum with median suture; female funicular segment 3, 1.6 x longer than segment 2.

Entrichopteris eberhardi n. sp.

(Figs. 41, 87)

Discription: Female: Length 0.9 mm. Body brownish; transverse suture black; antennal scape light brown; pedicel paler; flagellum brownish and club paler; posterior half of gaster dark brown; legs yellowish; mid and hind coxae light brown and fore tarsus brownish; fore wing hyaline, with broad black bands at mid and apical part of wing; hind wing fuscous except base and apical 0.33 hyaline.

Head wider than mesosoma (10:8), smooth, with short hairs scattered throughout; supraorbital suture extending diagonally toward occipital foraman but not reaching it; frons alutaceous to smooth; face coriaceous with sparsely scattered short white hairs; distance of ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; postgena width of eye, rounded; antennal funicle 6-segmented; scape elongate ovate, compressed and striated on inner side, with apical half curving outward; radicula confluent; pedicel ovate, slightly compressed, segments 4-6 thicker than segment 3; unsegmented club ellipsoidal; antennal segments in ratio 14: 6: 6: 10: 7: 5: 5: 6: 16 (Fig. 41).

Mesosoma as long as post petiolar region of metasoma, smooth; pronotum as wide as mesoscutum, covered with minute white hairs; mesoscutum and scutellum smooth and polished; propodeum smooth and polished, pair of short white hairs beside median carina; fore coxa large, compressed, 1.3 x longer than wide; mesopleuron large, 0.66 length of mesosoma, 2 x longer than broad, hind coxa smooth with indistinct dorsal keel; fore wing wing behind venation hairy, dense bristle-like hairs beyond venation; submarginal and marginal veins thickened (Fig. 87); apex of marginal vein slightly thicker; longest marginal ciliae, longer than width of wing; hind wing narrow and long, blade-like, with evenly spaced, long setae, about 10 x longer than width of wing.

Metasomal petiole 0.66 length of post petiolar region of metasoma, flattened dorso-posteriorly, slightly broader in posterior half; metasomal tergum 2 (fused with 3), 0.66 length of post petiolar region of metasoma; length of metasomal terga in ratio 11: 2: 3: 1: 1: 1; gonostyli with short setae.

Male: Unknown.

Types: Holotype, female, COLOMBIA, Valle, Colombia above Saladido, 6500', 8.IV.1971 W. Eberhard and C. Garcia (CNC No. 18481).

Discussion: Although I have described but a single species (i.e. female) from Colombia, South America, I have later discovered many more undescribed species from incoming alcohol field samples from Central and South America. The habitat of these undescribed species ranges from low lying areas to 6,500 feet in elevation.

I am pleased to name this species after Dr. W. Eberhard.

Masonana polynemoides n. sp.

(Figs. 42, 88, 171-173)

Discription: Female: Length 1.0 mm. Body dark brown to blackish; antennal scape light brown; pedicel pale and flagellum dark brown; metasomal petiole and legs yellowish; mid coxa and tarsi light brown; metasomal tergum 2 brownish; fore wing hyaline, maculate spots arranged in triangular pattern, 2 at apex and 1 anteromedially; hind wing whitish except brownish at base.

Head wider than mesosoma (10: 8) (Fig. 171); vertex convex, generally smooth, with blunt, spine-like setae evenly spaced; broad foveae in front of anterior ocellus and laterad of posterior ocellus (Fig. 173); 2 deep pits dorso-laterally of toruli; frons smooth and polished, with median cavity bordered by high ridges, slightly divergent towards mouth; distance between ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; postgena width of eye, rounded posteriorly; antennal scape subtriangular, inner margin with rasp-like scales, apex bluntly pointed; radicula short, separated; pedicel subovate, slightly compressed on one side, concave on other side, shorter than funicular segment 1; segments 1-3 cylindrical; funicular segments 4-

6 slightly thicker apically or nearly spindle shaped; funicular segments 5-6 and club densely pubescent; club somewhat flattened, ellipsoidal; length of antennal segments including radicula in ratio 6: 4: 6: 8: 6: 6: 6: 5: 12 (Fig. 42).

Mesosoma as long as metasoma (Figs. 171, 172), smooth; posterolateral margin of pronotum divided mid dorsally by small subrectangular plate (Fig. 171); lateral margin of lateral lobe of mesoscutum with longitudinal crest or fold extended to posterior margin; mesoscutum, scutellum amd propodeum smooth and polished; mid propodeum above petiolar emargination with 2 setae; mesepisternal suture forming deep Y-shaped furrow; fore and mid coxae short, broadly ovate; hind coxa without dorsal carina; length of fore wing 1.1 mm, densely pubescent (Fig. 88); area behind venation hairy; submarginal vein broad at base, tapering distally and confluent with marginal vein at apex; hind wing narrow and long, with evenly spaced long, marginal setae.

Metasomal petiole subcylindrical, slightly flattened dorsally (Fig. 172); post petiolar region of metasoma ovate; metasomal terga 2 and 3 partially fused (Fig. 172); metasomal tergum 4, longest, about as long as metasomal terga 5-7 combined; length of metasomal terga in ratio 1: 2: 10: 3: 1.5: 1.5 (Fig. 172).

Male: Length 1.0 mm. Similar to female except as follows: length of fore wing 1.3 mm; flagellum subcylindrical, 11-segmented; length of antennal segments in ratio 9: 5: 10: 13: 13: 13: 13: 13: 13: 13: 13: 13: 12; metasomal petiole cylindrical; length of metasomal terga in ratio 30: 3: 3: 1: 1: 1.

Types: Holotype, female, PANAMA, Chiriqui Prov., 2 km W. Cerro Punta, 19.V - 8.VI.77, S. Peck and H. Howden (CNC No. 18482). Allotype, male, same data as holotype. Paratypes: female, COSTA RICA, Punta Arenas, Monteverde Res. cloud forest, 1500 m, II.80, W.R.M. Mason; female, COSTA RICA, Punta Arenas, Monteverde Res., 27-29.V.79, J.M. and B.A. Campbell; 5 females, ECUADOR, Napo, 5 km N. El Chaco, 2000 m, 11.II.83, L. Masner and M. Sharkey; 5 females, ECUADOR, Napo, 5 km N. El Chaco, 11.II.83, L. Huggert; female, ECUADOR, Napo, Baeza, 9.II.83, 1900 m, L. Masner; female, ECUADOR, Napo, Baeza, 2000 m, 20-25.II.79, W.R.M. Mason; 21 females, VENEZUELA, Merida, Sta. Rosa, 1800 m, 11.V.81, L. Masner; 3 females, VENEZUELA, Merida, small valley areas nr. Chama, 1800 m, 5.V.81, L. Masner; 11 females, VENEZUELA, Merida, Forestry Faculty, 1800 m, 11.V.81, L. Masner.

Discussion: The specific name *polynemoides* pertains to the long, marginal cilia of the fore wing.

Restisoma howdeni n. sp.

(Figs. 43, 99, 174-177)

Discription: Female: Length 0.6 mm. Body yellowish brown; vertex dark brown; scape and pedicel brownish and flagellum dark brown; pleura dark brown; legs white; tibiae and tarsi light brown; petiole whitish; basal 0.33 of gaster white, and apical 0.66 dark brown; wings hyaline with faint dark band beyond basal area.

Head slightly narrower than mesosoma (Fig. 174); vertex distinctly elevated above eye level with scattered stout, blunt, setae (Figs. 174, 176); distance between ocelli in ratio (LOL), 1, (POL) 2, (OOL) 1 (Fig. 176); antennal scape stout, ovate, about twice as long as wide, with inner side flattened (Fig. 177); radicula short, confluent; pedicel conically ovate; funicle segments filiform; segments 4-6 slightly wider than segment 3; club ellipsoidal; length of antenna including radicular in ratio 12: 5: 3: 7: 6: 6: 4: 4: 22 (Fig. 43).

Mesosoma as long as metasoma, coarsely microreticulate (Fig. 174); long seta on posterior lateral margin of pronotum; mesoscutum and scutellum with short sparse hairs; fore wing pubescent throughout (Fig. 99), long, spatulate; cilia on apical posterior margin nearly as long as width of wing.

Metasomal petiole as long as hind coxa; post petiolar region of metasoma smooth, concave, triangular in lateral view (Fig. 174); metasomal terga 2 plus 3 (fused) longest; metasomal terga in ratio 10: 4: 2: 3: 3: 2; ovipositor extended just beyond apex of gaster.

Male: Length 0.4 mm. Similar to female except as follows: punctation on mesosoma less intensive than female; head except vertex, meso- and metapleura smooth; pedicel rounded; length of antennal segments in ratio 6: 4: 4: 4: 5: 5: 4: 5: 5: 5: 5: 5: 6; metasomal terga in ratio 10(2-3): 4: (metasomal terga 5-7 retracted into post petiolar region of metasoma).

Type: Holotype, female, PANAMA, Chiriqui Prov., 15 km N.W. Hato del Volcan, 1200 m, 24-31.V.1977, S. Peck and H. Howden (CNC No. 18483). Allotype, male same data as holotype. Paratypes, 4 females, male, PANAMA, same data as holotype; 2 females, PANAMA, Chiriqui Prov., 2 km W. Cerro Punta, 1700 m, 19.V.-8.VI.1977, S. Peck and H. Howden; female, COSTA RICA, San Vito de Coto Brus, 1200 m, 17.VIII-12.IX.82, J. Helava.

Discussion: I am pleased to name the species in honor of Dr. H.F. Howden.

Tanyostethium elongatum n. sp.

(Figs. 46, 101)

Discription: Female: Length 4 mm. Body brownish; antennal scape and pedicel pale to yellowish brown; flagellum brownish; legs pale to yellowish brown; pronotum and mesoscutum yellowish brown; 0.33 length of metasomal tergum 2 yellowish brown; middle of fore wing slightly smoky.

Head narrower than mesosoma; vertex smooth, convex, with setae; ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1.5; postgena as wide as width of eye; antennal scape subovate, compressed; pedicel flattened, as long as broad, longer than funicle segment 1; funicle 6-segmented; segment 1 short, as long as broad; funicle segments 2-3 cylindrical; funicle segments 4-6 gradually thickened distally; club flattened, ellipsoidal; length of antennal segments including radicula in ratio 6: 3: 7: 12: 10: 3: 3: 4: 12 (Fig. 46).

Mesosoma 0.5 length of metasoma, smooth and polished; anterior part of pronotum nearly vertical in lateral view; mesoscutum and scutellum subequal in length, smooth, polished and bare; propodeum, meso- and metapleura smooth, polished and bare; fore and mid coxae subequal in length; mid coxa as long as broad; hind coxa longer than mid coxa (8: 5), without dorsal keel; fore wing (Fig. 101), at basal 0.5 bare, remainder sparsely pubescent; marginal vein thickened, 3-4 x longer than wide; hind wing minute, posterior margin with long marginal setae.

Metasomal petiole smooth; metasomal terga 2-3 (fused), 0.33 length of post petiolar region of metasoma; length of metasomal terga in ratio 3(2-3): 2: 1.5: 1.5: 1.5.

Male: Length 4 mm. Similar to female except as follows: flagellum filiform, as long as fore wing, narrow, long and cylindrical; length of antennal segments in ratio 0.4: 0.3: 0.7: 1: 1: 1: 1: 1: 1: 1: 0.8: 0.7; 0.5 apex of wing disc pubescent.

Types: Holotype, female, BRAZIL, Represa Rio Grande, Guanabara, VII.1972. F.H. Oliveira (CNC No. 18484). Allotype, male same data as holotype.

Discussion: The specific name, *elongatum* refers to the long and slim body.

Acmopolynema helavai n. sp.

(Figs. 48, 93)

Discription: Female: Length 2.3-2.5 mm. Body brownish; antenna yellowish, funicular segments 2-5 brownish yellow; head yellowish brown; pronotum yellowish; fore coxa whitish; mid and hind coxae yellowish brown; legs yellowish brown; mid and hind femora and tibia brownish except base of tibia whitish; forewing with dark bands (Fig. 93); metasomal petiole whitish except base brownish; ovipositor yellowish except apices dark.

Head as wide as mesosoma; vertex flattened, smooth, twice as broad as long; 3 minute hairs between anterior and posterior ocellus; supraorbital suture extending to level of posterior ocellus; transverse suture short, not extending to eye margin; frontal suture absent; ocelli in ratio (LOL) 1, (POL) 2, (OOL) 0.5; face covered with rasp-like scales and with 6 long setae along post antennal suture; antennal funicle 6-segmented; scape with rasp-like scale at inner side, subrectangular; radicula tiny, separated; length of antennal segments including radicula in ratio 5: 2: 4: 10: 11: 6: 6: 5: 9 (Fig. 48).

Mesosoma slightly longer than post petiolar region of metasoma (40: 35), smooth except lateral side of lateral lobe reticulate, subtriangular, lateral margin with sharp edge; length of pronotum, mesoscutum and propodeum in ratio 10: 25: 8; pronotum divided medially, lateral margin forming a sharp edge; hind margin of pronotum with 11-12 short, blunt setae on each side; mesothoracic spiracle on posterio-lateral margin; propodeum smooth, median area with highly elevated, broad median V-shaped carina extending 0.5 distance of propodeum; plicae thickened at base, extending 0.75 length of propodeum; propodeal spiracle tiny, subrounded, separated from anterior margin of propodeum by twice its diameter; hind leg nearly as long as length of body including ovipositor; hind coxae elongately triangulate, with 3 corners sharply margined at apex, as long as metasomal petiole or slightly longer in males; basal 0.33 of fore wing bare, followed by patches of pubescence at about middle of wing; apical portion with few scattered hair lines; apical and posterior marginal ciliae about 0.2 of width of wing (Fig. 93).

Metasomal petiole cylindrical, as long as hind coxa; post petiolar region of metasoma ellipsoidal in lateral view, dorsally concave, ventral part compressed laterally forming V-shaped keel; metasomal tergum 2 covering 0.5 length of post petiolar region of metasoma; length ratio of metasomal terga, 10: 7: 5: 4: 5: 5.

Male: Length 3.0 mm. Similar to female except as follows: flagellum filiform, longer than fore wing (3.5: 2.5), rod-shaped, except flagellar segment 1 elongately concave beneath; length of antennal segments in ratio 0.4: 0.3: 1: 1.5: 1.5: 1.5: 1.5: 1.3: 1.3: 1.2: 1.2: 1: 1; metasomal petiole slightly longer than hind coxa; post petiolar region of metasoma as long as mesosoma.

Types: Holotype, female, PANAMA, Cerro Campana, 8°40'N, 19°50'W, 850 m, 7-14.V.73, J. Helava (CNC No. 18485). Allotype: COSTA RICA, B. Carrillo N.P., 8°07'W, 10°10'N; 10.IV.85; 500 m, H. Goulet - L. Masner. Paratype, female, ECUADOR, Pichincha, 47 km S. Santo Domingo, Rio Palenque Station, 1-14.VII.1975, A. Forsyth; female, 9 males, COSTA RICA, same data as allotype.

Diagnosis: *Acmopolynema helavai* differs from other members of this genus by having the hind coxa elongate with 3 corners sharply margined and the ovipositor 1.3 x as long as post petiolar region of metasoma.

Discussion: I am pleased to name this species after J. Helava.

Acmopolynema pecki n. sp.

(Figs. 49, 94)

Discription: Female: Length 1.25 mm. Body dark brown; antenna yellowish brown; scape and pedicel with dark streak on dorsal margin; funicle 1-3 brownish; club light brown; trochanter and anterior part of tibia yellowish brown; metasomal petiole yellowish.

Head as wide as mesoma; "neck region" or cervical sclerite of propleuron with 2 subrectangular plates, medially divided by carinae; vertex flattened, smooth, about twice as broad as long with minute hairs between anterior and posterior ocelli; supraorbital suture extended to posterior ocelli; transverse suture extended to eye margin; post frontal suture absent; ocelli arranged in acute triangle in ratio (L0L) 1, (P0L) 2, (00L) 0.5; lower frons with vertical suture reaching near ventral margin of toruli, postantennal suture extending to lateral corner of clypeus; middle lower half of face slightly convex, oral margin semicircularly shaped; lateral margin of face with 2 long setae; antenna inserted mid distance between transverse suture and anterior clypeal margin or slightly above ventral margin of eyes; funicle 6-segmented; scape rectangular, inner side substrigulate lengthwise; radicular tiny, separated; length of antennal segments including radicula in ratio 5: 2: 4: 9: 8: 6: 5: 4: 9 (Fig. 49).

Mesosoma shorter than post petiolar region of metasoma (25: 40); smooth, except mesoscutum and scutellum finely strigulate; pronotum not divided; pronotum, mesoscutum and scutellum in ratio 3: 9: 11; scutellum slightly longer than wide (11:9); posterior scutellum with wide flange extended beyond apical margin of metanotum; anterior lateral margin of propodeum deeply excavated laterally, propodeal spiracle hidden under metanotum and posterior margin of posterior scutellum; short subcylindrical nucha exposed posteriorly; 0.33 base of fore wing bare, apical 0.6 of disc with sparse hair lines (Fig. 94); length of apical and posterior marginal cilia, 0.25 width of wing; marginal vein
0.25 length of submarginal vein.

Metasomal terga in length ratio: 4: 12: 5: 2: 3: 6; ovipositor coiled at basal tergum and extended 1.5 x length beyond apex of post petiolar region of metasoma.

Male: Unknown.

Types: Holotype, female, ECUADOR, Pichincha, 16 km S.E. Santo Domingo, Tinalandia, 680 m, 15-30.VI.75, S. and J. Peck (CNC No. 18487). Paratypes, 2 female, ECUADOR, Pichincha, 47 km S. Sto. Domingo, Rio Palenque Sta., 27.II.76, S. and J. Peck; female, ECUADOR, Pastaza, 25 km N. Puya, 1000 m, 14-16.VII. 1976, S. and J. Peck, forest edge.

Diagnosis:: This species differs from members of other species-groups by the following combinations of characters: post petiolar region of metasoma ellipsoidal, flattened laterally with ovipositor 2 x as long as post petiolar region of metasoma and antenna nearly as long as combined length of mesosoma and metasoma.

Discussion: It is a pleasure to name this species after Dr. Steward Peck, an excellent collector.

Acmopolynema plaumanni n. sp.

(Figs. 50, 95)

Description: Female: Length 1.3 mm. Head and mesosoma dark brown to black; antennal scape, pedicel and funicular segment 1 pale; segments 2-6 light to dark brown; club dark brown; fore coxa and femur brownish; tibia and tarsus lighter; mid and hind coxae and trochanter pale; femora and tibiae brown, except anterior half of tibiae and tarsi pale; metasomal petiole pale; post petiolar region of metasoma light brown, darker medially; ovipositor pale at base, darker apically; mid area of fore wing with broad brownish band.

Head as wide as mesosoma; "neck region" or cervical sclerite of propleuron with plates; vertex flattened, smooth, 0.5 as long as broad; 2 minute hairs between anterior and posterior ocelli; supraorbital suture extending to level of posterior ocellus; transverse suture extending to eye margin; post frontal suture absent; ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; frons and face without hairs; subantennal suture shallow, divergent medially; antenna inserted halfway between transverse suture and anterior clypeal margin or slightly above ventral margin of eyes; scape subrectangular, about twice as long as broad, slightly broadened apically; inner side of scape somewhat flattened with rasp-like scale; radicula tiny, separated; length of antennal segments including radicula in ratio 6: 3: 4: 7: 8: 8: 7: 6: 11 (Fig. 50).

Mesosoma slightly shorter than post petiolar region of metasoma (23: 27); pronotum broadly bell-shaped, mid anterior part forming acute V-shaped suture with carinae, posterior margin broadly inverted V-shaped; length of pronotum, mesoscutum and scutellum in ratio 4: 8: 6; median vertical suture of mesoscutum present; hind margin of pronotum with 6 short, gross, blunt, setae-like hairs; prepectus elongate, triangular; scutum smooth, and tegula finely reticulate to reticulate; propodeum short, about 0.33 as long as wide, smooth, broad V-shaped carinae extending full length of propodeum; plicae thickened at base, nearly reaching propodeal spiracle; propodeal spiracle tiny, rounded, separated from anterior margin of propodeum by twice its diameter; fore wing bare behind venation, followed by sparse, hair lines; apical and posterior marginal cilia longest, about 0.33 width of wing (Fig. 95).

Metasomal terga with length ratio of 10: 5: 5: 5: 5: 2; ovipositor coiled at base of post petiolar region of metasoma and extended 0.33 length of post petiolar region of metasoma, beyond apex; apex of ovipositor curved upward in shape of "S".

Male: Unknown.

Type: Holotype, female, BRAZIL, Santa Catarina, Nova Teutonia, 27°11'S, 52°23'W, 300-500 m, VI.1971, F. Plaumann (CNC No. 18486). Paratypes, 2 females, BRAZIL, Represa Rio Grande, Guanabara, VII.1972, VIII.1972, F.M. Oliveria.

Diagnosis:: This species differs from other members of *Acmopolynema* species-groups by the following combinations of characters: post petiolar region of metasoma ovate, compressed laterally, dorsal and ventral margins forming a keel, mid anterior part of pronotum with V-shaped suture with carinae, posterior margin broadly inverted V-shaped.

Discussion: I am pleased to name this species in honor of Dr. Fritz Plaumann of Brazil.

Platyfrons helavai n. sp.

(Figs. 51, 100, 181-183)

Description: Female: Length 1.23 mm. Body dark brown to brownish; vertex and frons brownish; antenna dark brown, except pedicel yellowish; fore and hind coxae brownish; apex of fore femur and basal part of tibia yellowish; basal 2 tarsi of middle and hind legs yellowish; metasomal petiole yellowish; fore wing smoky.

Head slightly wider than mesosoma, smooth, with few scattered fine hairs on occipital area (Fig. 183); distances between ocelli in ratio (LOL) 1, (POL) 2, (OOL) 1; postgena slightly shorter than width of eye; antennal funicle 6-segmented; scape compressed, 7 x longer than wide; pedicel long, conical about 3 x longer than width of funicle segment 1; radicula short, confluent; funicular segments

1-4 narrow, cylindrical; segments 5-6, slightly thicker apically; club ellipsoidal; length of antennal segments including radicula in ratio 7: 4: 4: 8: 7: 5: 4: 3: 13 (Fig. 51).

Mesosoma 1.5 x longer than post petiolar region; pronotum and mesoscutum smooth and polished; pronotum divided longitudinally, posterior margin with row of 4 setae, 0.33 length of mesoscutum (Fig. 181); apex of axillae meeting notauli at transscutal suture; scutellum finely reticulate; mesepimeral suture perpendicular to body, smooth; fore and mid coxae subequal in length; hind coxa 1.5 x longer than mid coxa, elongate, ovate, coarsely sculptured and hairy dorsally (Fig. 182); fore wing behind venation bare,densely pubescent beyond venation (Fig. 100); marginal vein short, and narrow, 6 x longer than wide (Fig. 100); hind wing narrow, elongate, parallel sided, apex acuminate; hind margin with long setae.

Metasomal petiole sculptured; metasomal tergum 2, 0.2 as long as terga 3 and 4 (fused); metasomal tergum 5, as long as tergum 2; metasomal terga 6 and 7 partially retracted into post petiolar region of metasoma; length of metasomal terga in ratio 1: 2.5(3-4): 1: 0.5: 0.5.

Male: Length 0.9 mm. Similar to female except as follows: fore wing 1.5 x longer than body; antennal flagellum filiform, 11-segmented; antennal scape dark brown; length of antennal segments in ratio 10: 5: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1; metasomal petiole cylindrical and smooth; length of metasomal terga in ratio 1: 0.5: (terga 4-5 fused) 2.0; metasomal terga 6 and 7 retracted into post petiolar region of metasoma.

Types: Holotype, female, COLOMBIA, Caldas, 5° 15'N, 76° 25'W, 3300-3500 m, Elfin forest, 3.IV.73, J. Helava (CNC No. 18489). Allotype, male, same data as holotype, J. Heleva. Paratypes, male, COLOMBIA, Boyaca, 5°43'N, 73°30'W, 2050 m, 7.III.73, J. Helava; female, ECUADOR, Napo, below Papal lacta, 3000 m, 17.II.83, L. Masner.

Discussion: I am pleased to name this species after J. Helava.

Formicomymar venezuelaensis n. sp.

(Figs. 52, 96, 188-191)

Description: Female: Length 1.0 mm. Body dark brown; metasomal petiole yellowish; eyes reddish; tarsi 1 and 2 yellowish; apical 3 terga brownish yellow.

Head wider than mesosoma (1.0: 0.8) (Fig. 189); vertex alutaceous and striate; distance between ocelli in ratio (LOL) 2.5, (POL) 5, (OOL) 0.5; transverse and supraorbital sutures broad; postfrontal carina extending 0.5 distance to occipital foramen (Fig. 189); scape and pedicel smooth; scape flattened, narrow and long, tapering narrowly to apex; radicula short, confluent; length of antennal segments including radicula in ratio 12: 7: 3: 6: 5: 4: 3: 4: 17 (Fig. 52).

Mesosoma 0.7 length of post petiolar region of metasoma; pronotum smooth, posterior margin with 8 setae evenly spaced and median carina (Fig. 189); median lobe of mesoscutum with fine, longitudinal striation; lateral lobe of mesoscutum smooth; anterior scutellum and posterior scutellum finely sculptured medially, lateral margins smooth; episternal suture with deep, acute trough, prepectus and propleuron triangular (Fig. 188); propodeum rectangular, 1.5 x broader than long (Fig. 191); posterior margin of propodeum narrowed, apex tapered to short nucha; outer surface of fore coxa smooth, subcircular and flattened; inner surface of fore coxa semi-ovate; mid coxa smallest among fore and hind coxae; hind coxa elongate ovate, longest, outer and dorsal surface coarsely sculptured (Fig. 191); fore wing brachypterous (Fig. 96); marginal vein greatly enlarged.

Metasomal petiole transversely rugulose, posterior margin carinate; post petiolar region of metasoma smooth, ventrally keeled; metasomal tergum 2 inverted L-shaped in lateral view, hind margin straight; length ratio of metasomal terga as follows: 2: 0.5: 0.5: 0.5: 0.4: 0.5; pygostyle with 3 short, setae, subequal in length.

Male: Unknown.

Types: Holotype, female, VENEZUELA, Merida, Laguna Negra, 4000 m, 29.IV.1981, L. Masner (CNC No. 18490). Paratype, female, same data as holotype.

Discussion: The species is named after the type locality.

Acknowledgements

I am sincerely thankful to the Canadian Forestry Service for their continual support and encouragement in my research activities and to the Biosystematics Research Centre for the use of the collection and wholehearted cooperation.

I am grateful to my colleagues, Drs. Jeff Cumming, G.P. Gibson, L. Masner and M. Sharkey, of the Biosystematics Research Centre, Ottawa, Dr. John Huber, Canadian Forestry Service, Dr. M. Schauff, Systematic Laboratory Lab., USDA, ARS, Washington, D.C., and Dr. Lars Huggert, Zoological Institute, Department of Systematics, Lund, Sweden, for their comments and criticisms of the manuscript.

I am indebted to Dr. John Noyes of the British Museum (Nat. Hist.), London, for identifying some of the mymarids from the CNC.

My thanks go to Mr. Eugene Bisdee of BRC, Mr. Ann Fook Yang, Plant Research Centre, Agriculture, Dr. John Huber, Canadian Forestry Service, for taking the scanning electron photographs and to Mr. David Tierney for the line drawings and for preparation of the photographs and the layout of the figure plates.

Sincere thanks to P. Dessart (MRHN), Brussels, J. Noyes (BMNH), London, L. DeSantis, A.P. Fidalgo (CNM), La Plata, E.C. Dahms, (QM), Brisbane, M. Schauff (USNM), Washington, D.C. for lending me the type material.

References

Alayo, D. and L.R. Hernandez, 1978. Introduccion al estudio de los Himenopteros de Cuba. Superfamilia Chalcidoidea. Direccion de Publicaciones de la ACC, La Habana. 105 pp.

Annecke, D.P. 1961. The genus *Mymar* Curtis (Hymenoptera, Mymaridae). Sth. Afr. J. Agric. Sci. 4: 543-552.

Annecke, D.P., and R.L. Doutt, 1961. The genera of the Mymaridae. Hymenoptera: Chalcidoidea. S. Afr. Dept. Agr. Techn. Serv., Ent. Mem. 5: 1-71.

Arnett, R.H. Jr., Samuelson, G.A., Geppner, J.B., Nishida, G.M., Watt, J.C., and Woodruff, R.E. 1986. The insect and spider collections of the World. E.J. Brill / Flora and Fauna Publ. Gainesville, Fla. 1-220 pp.

Ashmead, H.H. 1879. Injurious and beneficial insects found on the orange trees of Florida. Can. Ent. 11: 159-160.

Ashmead, H.H. 1887. Studies of the North American Proctotrupidae with descriptions of new species from Florida. Can. Ent. 19: 192-198.

Ashmead, H.H. 1900. Some Hymenopterous parasites from Dragonfly eggs. Ent. News. 11: 615-617.

Ashmead, H.H. 1904. Classification of the chalcid-flies or the Superfamily Chalcidoidea, with descriptions of new species in the Carnegie Museum, collected in South America by H.H. Smith. Mem. Carneg. Mus. 1: 225-551.

Bakkendorf, O. 1932. Biological investigations on some Danish Hymenopterous egg parasites, especially in Homopterous and Heteropterous eggs, with taxonomic remarks and descriptions of new species. Ent. Meded. 19: 1-134.

Bakkendorf, O. 1962. Description of a new subterranean genus of Mymaridae (Hymen.). Mitt. schweiz. ent. Ges. 34: 372-376.

Bakkendorf, O. 1964. Descriptions of a new subterranean species including a male and female of *Eustochus* Hal. (Hym., Mymaridae). Mitt. schweiz. ent. Ges. 37: 117-122.

Boucek, Z. and M.W.R. De V. Graham. 1972. The identity of the type-species of *Gonatocerus* Nees (Hymenoptera: Mymaridae). J. Ent. (B) 41: 125-130.

Brethes, J. 1913. Himenopteros de la America meridonal. Ann. Mus. nac. Buenos Aires. 24: 35-160.

Brethes, J. 1917. Description d'un Mimaridae noveau du Chili. Revist. Chilena, 21: 82-84.

Brethes, J. 1922. El bicho de cesto (*Oeceticus kirbyi* var. *platensis* Berg.). Compana 1920-1921. Dos nuevos parasitos. Inst. biol. Soc. rural Argentina, Bueos Aires. 28 pp.

Brues, Charles T., 1907. Notes and descriptions of North American parasitic Hymenoptera. Bull, Nat. Hist. Soc. N. Ser. 5: 96-lll.

Burks, B.D. 1979. Mymaridae pp. 1022-103. *in* Krombein, K.W. *et al.*, (Eds.), Catalog of Hymenoptera in America north of Mexico. vol. 1. Symphyta and Apocrita (Parasitica) Smithsonian Institution. Press, Wash. D.C. 1198 pp.

Clausen, C.P. 1940. Entomophagous Insects. McGraw-Hill. 688 pp.

Crawford, J.C. 1913. Descriptions of New Hymenoptera No. 8. Proc. U.S. natn. Mus. 46: 343-352.

Crosby, C.R. and M.D. Leonard. 1914. An egg parasite of the Tarnished Plant Bug, *Lygus pratensis* L. Can. Ent. 46: 181-182.

Curtis, J. 1832. British Entomology, London, 411 pp.

Dalla Torre, K.W. v. 1898. Catalogus Hymenopterorum hucusque descriptorum systematicus et synonymicus. V. Chalcididae et Proctotrupidae. Engelmann, Leipzig. 598 pp.

Debauche, H.R. 1948. Etude sur les Mymarommidae et les Mymaridae de la Belgique (Hymenoptera, Chalcidoidea). Mem. Mus. r. Hist. nat. Belg. 108: 1-248.

Debauche, H.R. 1949. Mymaridae (Hymenoptera, Chalcidoidea). Explor. Parc. nat. Albert Miss. G.F. de Witte. 49: 1-105.

DeSantis, L. 1967. Catalogo de los himenopteros argentines de la Serie Parasitica, incluyendo Bethyloidea. Prov. Buenos Aires, Com., Invest. Cient. Mem. l-337 pp.

DeSantis, L. 1971. La Fauna de Chalcidoideos de America de Sur. Bol. Soc. Entomol. Peru. 6: 57-63.

DeSantis, L. 1979. Catalogo de los himenopteros chalcidoideos de America al sur de los Estados Unidos. Commun. Invest. Cienc. Prov. Buenos Aires, Publ. Especial, La Plata. 488 pp.

DeSantis, L. 1980. Catalogo de los himenopterous brasilenos de la serie Parasitica incluyendo Betholoidea. Editora da Universidade Federal do Parana, Curitiba. 395 pp.

Doutt, R. L. 1947. The occurrence of the genus *Stethynium* in California (Hymenoptera: Mymaridae). Pan-Pacif. Ent. 23: 152-154.

Doutt, R. L. 1949*a*. The genus *Erythmelus* in California (Hymenoptera, Mymaridae). Pan Pacif. Ent. 25: 77-81.

Doutt, R. L. 1949*b*. A synopsis of North American *Anaphoidea* (Hymenoptera: Mymaridae). Pan Pacif. Ent. 25: 155-160.

Doutt, R. L. 1973*a*. The genus *Paranaphoidea* Girault (Hymenoptera, Mymaridae). Pan-Pacif. Ent. 49: 185-187.

Doutt, R. L. 1973*c*. The fossil Mymaridae (Hymenoptera: Chalcidoidea). Pan-Pacif. Ent. 49: 221-228.

Doutt, R. L. 1974. The genus *Dicopus* Enock (Hymenoptera: Mymaridae). Pan-Pacif. Ent. 50: 165-168.

Doutt, R.L. and C.M. Yoshimoto. 1970. Hymenoptera: Chalcidoidea: Mymaridae of South Georgia. Pacif., Insects Monogr. 23: 293-294.

Dozier, H.L. 1932. Descriptions of new mymarid egg parasites from Haiti and Puerto Rico. J. Dept. Agr. Puerto Rico. 16: 81-91.

Dozier, H.L. 1933. Miscellaneous notes and descriptions of chalcidoid parasites (Hymenoptera). Proc. ent. Soc. Wash. 35: 85-100.

Dozier, H.L. 1936. Several undescribed Mymarid egg-parasites of the genus *Anagrus* Haliday. Proc. Hawaii. ent. soc. 9: 175-178.

Dozier, H.L. 1937. Descriptions of miscellaneous chalcidoid parasites from Puerto Rico (Hymenoptera). J. Agric. Univ. Puerto Rico. 21: 121-135.

Enock, F. 1909. New Genera of British Mymaridae (Haliday). Trans. R. ent. Soc. Lond. 1909: 449-459.

Enock, F. 1914. On a new genus of Mymaridae. Proc. R. Ent. Soc. Lond., 1913: CXXXIV.

Enock, F. 1915. A new mymarid from Hastings. Hastings and E. Sussex Nat. 2: 178-181.

Ferriere, Ch. 1952. Un nouveau genre Mymaridae (Hym.). Mitt. Schweitz. Entomol. Gesell. 25: 41-43.

Foerster, A. 1847. Ueber die Familie der Mymariden. Linnaea Ent. 2: 195-233.

Foerster, A. 1841. Beitrage zur Monographie der Pteromalinen Nees, Aachen.

Foerster, A. 1856. Chalcidae und Proctotrupii. Hym. Stud. 2: 1-152.

Fullaway, D.T. 1944. Descriptions of a new mymarid egg parasite collected at Los Mochis, Sinaloa, Mexico. Proc. Hawaii. Ent. Soc. 12: 57.

Gahan, A.B. 1913. New Hymenoptera from North America. Proc. U. S. natn. Mus. 46: 431-443.

Gahan, A.B. 1918. Three new chalcidoid egg-parasites. Proc. ent. Soc. Wash. 20: 23-26.

Gahan, A.B. 1927. Miscellaneous descriptions of new parasitic Hymenoptera with synonymical notes. Proc. U.S. natn. Mus. 71: 1-39.

Gahan, A.B. 1932. Miscellaneous descriptions and notes on Parasitic Hymenoptera. Ann. ent. Soc. Amer. 25: 736-757.

Gahan, A.B. 1937. Two new chalcidoid egg-parasites (Eulophidae and Mymaridae). Proc. ent. Soc. Wash. 39: 266-269.

Gahan, A.B. and M.M. Fagan. 1923. The type species of the genera of Chalcidoidea or chalcid-flies. Bull. U.S. natn. Mus. 124: 1-173.

Ghesquiere, J. 1942. Contribution a l'etude des Hymenopteres du Congo Belge -- IX. Remarques sur la famille des Mymarides et description d'especes nouvelles. Revue Zool. Bot. afr. 36: 317-328.

Ghesquiere, J. 1946. Contribution a la etude des Microhymenopteres du Congo Belge. V-XI. Rev. Zool. Bot. Afr., Brussels. 39: 367-373.

Girault, A. A. 1905*a*, *Anaphes conotracheli* species noven, an important egg-parasite. Ent. News. 16: 220.

Girault, A. A. 1905*b*. Two new Mymaridae. Psyche 12: 91-92.

Girault, A. A. 1908*a*. Descriptions of three new North American Chalcidoidea of the subfamilies Mymarinae and Aphelininae. Psyche. 15: 115-121.

Girault, A. A. 1908*b*. A monographic catalogue of the mymarid genus *Alaptus* Haliday, with descriptions of three new North American forms and of *Alaptus iceryae* Riley from type material. Ann. ent. Soc. Amer. 1: 179-195.

Girault, A. A. 1909*a*. A monographic catalogue of mymarid genus *Camptoptera* Foerster, with description of one new North American form. Ann. ent. Soc. Amer. 2: 22-29.

Girault, A. A. 1909*b*. A new chalcidoid genus and species of the family Mymaridae from Illinois, parasitic on eggs of the weevil *Tyloderma foveolatum* (Say), J. N. Y. ent. Soc. 17: 167-171.

Girault, A. A. 1910. Synonymic and descriptive notes on the chalcidoid family Mymaridae. J. N. Y. ent. Soc. 18: 233-259.

Girault, A. A. 1911*a*. A new mymarid genus and species from North America allied with *Anthemus* Howard. Proc. ent. Soc. Wash. 13: 185-187.

Girault, A. A. 1911*b*. Descriptions of North American Mymaridae with synonymic and other notes on described genera and species. Trans. ent. Soc. Amer. 37: 253-324.

Girault, A. A. 1911*c*. Notes on the Hymenoptera Chalcidoidea, with descriptions of several new genera and species. J. N. Y. ent. Soc. 19: 175-189.

Girault, A. A. 1911*d*. The probable occurrence of the mymarid genus *Dicopus* Enock in North America (Hymen.). Ent. News 22: 347-349.

Girault, A. A. 1911*e*. Descriptions of three new North American species of the mymarid genus *Polynema* Haliday parasitic on membracid eggs, with a list of species described since the year 1898. Jl. N.Y. ent. Soc. 19: 12-23.

Girault, A. A. 1911*f*. The occurrence of the mymarid genus *Mymar* Haliday in North America. Jl. N.Y. ent. Soc. 19: 92-96.

Girault, A. A. 1911*g*. A new *Polynema* from Mexico (Hymen.). Ent. News 22:358.

Girault, A. A. 1912*a*. Notes on Hymenoptera Chalcidoidea. Ent. News 23: 296-299.

Girault, A. A. 1912*b*. Australian Hymenoptera Chalcidoidea -- II. The family Mymaridae with description of new species. Mem. Queensl. Mus. 1: 117-175.

Girault, A. A. 1912*c*. A new species of the mymarid genus *Polynema* Haliday from British Columba. Proc. ent. Soc. Wash. 14: 23-24.

Girault, A. A. 1913*a*. A second new genus of chalcidoid Hymenoptera of the family Mymaridae from Australia. Can. Ent. 45: 276.

Girault, A. A. 1913*b*. Additions to the Mymaridae and Trichogrammatidae of Australia. Entomologist 46: 255-259.

Girault, A. A. 1914*a*. Descriptions of new chalcid flies. Proc. ent. Soc. Wash. 16: 109-119.

Girault, A. A. 1914*b*. Two new Mymaridae from Paraguay in the Zoological Museum, Berl. Mitt. Zool. Mus. Berl. 7: 150-151.

Girault, A. A. 1915*a*. Australian Hymenoptera Chalcidoidea. II. Second Supplement. Mem. Qd. Mus. 3: 154-169.

Girault, A. A. 1915*b*. Some new chalcidoid Hymenoptera from North and South America. Ann. ent. Soc. Amer. 8: 272-278.

Girault, A. A. 1916*a*. Two new Mymaridae from the eastern United States (Hym.) Ent. News. 27: 69-70.

Girault, A. A. 1916*b*. New miscellaneous chalcidoid Hymenoptera with notes on described species. Ann. ent. Soc. Amer. 9: 291-308.

Girault, A. A. 1916*c*. Notes on North American Mymaridae and Trichogrammatidae (Hym.). Ent. News. 27: 4-8.

Girault, A. A. 1916*d*. Description of eleven new species of chalcid flies. Can. Ent. 48: 100-103.

Girault, A. A. 1916e. New miscellaneous chalcidoid Hymenoptera, with notes on described species . Ann. ent. Soc. Amer. 9: 291-308.

Girault, A. A. 1917a. New Chalcid flies, with notes. Bull. Brooklyn ent. Soc. 12: 86-89.

Girault, A. A. 1917b. Notes and descriptions of miscellaneous chalcid-flies (Hymenoptera). Proc. U.S. natn. Mus. 53: 445-450.

Girault, A. A. 1917c. Descriptiones Hymenopterorum Chalcidoidicarum Variorum Cum Observationibus V. pp. 1-16.

Girault, A. A. 1917d. A new species of the genus *Mymar* from the woods of Maryland with an important description note. Psyche 24: 99-100.

Girault, A. A. 1917e. Descriptions of miscellaneous chalcid-flies. Insector Inscit. menstr. 4: 109-121.

Girault, A. A. 1917f. New miscellaneous chalcid-flies from North America. Psyche 24: 91-99.

Girault, A. A. 1920. New Genera and species of chalcid-flies from Australia. Insec. Inscit. Menstr. 8: 37-50.

Girault, A. A. 1928. Australian chalcid-wasps. Victorian Nat. 44: 261-263.

Girault, A. A. 1929a. North American Hymenoptera Mymaridae. Privately published, Brisbane, Australia. 27 pp.

Girault, A. A. 1929b. Notes on, and descriptions of chalcid wasps in the South Australian Museum. Concluding paper. Trans. R. Soc. S. Austr. 53: 309-346.

Girault, A. A. 1931. A new habit in an old insect, Homo pudicus and New Eurytomidae. Privately printed. Brisbane, Australia. 4 pp.

Gomes, J.G. 1948. *Acmopolynema hervali* n. sp. parasito de ovos de *Lomaspis liturata* (Chalcidoidea, Mymaridae). Revta. bras. Biol., Rio de J. 8: 417-420.

Gordh, G. and D. Dunbar. 1977. A new *Anagrus* important in the biological control of *Stephanitis takeyai* and a Key to the North American species. Fla. Ent. 60: 85-94.

Graham, M.W.R. de 1973a. Some Mymaridae (Hymenoptera: Chalcidoidea) new to Britain. Ent. Gazette. 24: 47-50.

Graham, M.W.R. de 1973b. The identity of *Eutriche gracilis* Nees (Hymenoptera: Mymaridae) Ent. Gazette. 24: 362-364.

Graham, M.W.R. de 1982. The Haliday Collection of Mymaridae (Insecta, Hymenoptera, Chalcidoidea) with taxonomic notes on some material in other collections. Proc. Roy. Ir. Acad. Sec. B. 82: 12-243.

Gressitt, J.L. and C.M. Yoshimoto. 1963. Dispersal of animals in the Pacific. Pacific Basin Biogeography. Tenth Pacific Science Congress, Honolulu, Hawaii. Bishop Mus. Pres. 283-292 pp.

Haliday, A.H. 1833. An essay on the classification of the parasitic Hymenoptera of Britain, which correspond with the Ichneumones minuti of Linnaeus. Ent. Mag. 1: 333-350.

Haliday, A.H. 1839. Hymenopterorum Synopsis and Methodum clm. Fallenii utplurimum accomodata, 8: 1-4.

Hedqvist, K.J. 1960. Hymenoptera (Chalcidoidea) Mymaridae. S. Afr. Animal Life. 7: 423-432.

Hedqvist, K.J. 1962. *Herulia* gen. n. *sundholmi* sp. n., eine neue Mymariden gattung mit einer neuen Art von Schweden (Hym. Chalcidoidea, Mymaridae). Opusc. ent. 27: 103-105.

Hellen, W. 1974. Die Mymariden Finnlands. Fauna Fenn. 25: 1-31.

Hincks, W.D. 1950. Notes on some British Mymaridae (Hym.). Trans. Soc. Br. Ent. 10: 167-207.

Howard, L.O. 1908. A new genus and species of Mymaridae. Proc. ent. Soc. Wash. 10: 68-70.

Huber, J.T. 1986. Systematics, biology, and hosts of the Mymaridae and Mymarommatidae (Insecta: Hymenoptera): 1758-1984. Entomography. 4: 185-243.

Huber, J.T. 1987. Review of *Schizophragma* Ogloblin and the non-Australian species of *Stethynium* Enock (Hymenoptera: Mymaridae). Can. Ent. 119: 823-855.

Huber. J.T. 1988. The species groups of *Gonatocerus* Nees in North America with revision of the *sulphuripes* and *ater* groups (Hymenoptera: Mymaridae). Mem. Ent. Soc. Can. 141: 1-109.

Huber, J.T. and Rajakulendran, S.V. 1988. Redescription of and host-induced antennal variation in *Anaphes iole* Grirault (Hymenoptera: Mymaridae), an egg parasite of Miridae (Hemiptera) in North America. Can. Ent. 120: 893-901.

Jackson, D.J. 1958. Observation on the biology of *Caraphractus cinctus* Walker (Hym. Mymaridae), a parasitoid of the eggs of Dytiscidae 1. Trans. R. Ent. Soc. Lond. 110: 533-566.

Kieffer, J.J. 1913. Un nouveau Mymaridae d'Algerie, Bull. Soc. hist. nat. Alger. 4: 100-101.

Kloet, G.S. and W.D. Hincks. 1945. A check list of British insects. 483 pp. Stockport, England.

Koenigsmann, E. 1978. Das phylogenetische System der Hymenoptera Teil 3: Terebrantes (Unterordnung Apocrita). Dt. ent. Z. 25: 1-55.

Kozlov, M.A. and A.P. Rasnitsyn. 1979. On the limits of the family Serphitidae (Hymenoptera, Proctotrupoidea) (in Russian). Ent. Obozr. 58: 402-416.

Kryger, J.P. 1934. Synonymic remarks on some generic names of Mymaridae (Hym.). Ent. Meded. 18: 503-508.

Kryger, J.P. 1950. The European Mymaridae. Ent. Meded. 26: 1-96.

Leonard, M.D. and C.R. Crosby. 1915. A new species of *Gonatocerus* (Mymaridae) parasitic on the eggs of a new species of *Idiocerus* (Bythosicopidae) feeding on poplar. J. Econ. Ent. 8: 541-547.

Malenotti, E. 1917. *Metalaptus torquatus* n. gen. e n. specie di Calcidite. Redia Firenze, 12: 339-341.

Mathot, G. 1966. Contribution a la connaissance de Mymaridae et Mymarommidae d'Afrique Centrale (Hymenoptera, Chalcidoidea). Bull. Annls. Soc. r. ent. Belg. 102: 213-239.

Matthews, M.J. 1986. The British species of *Gonatocerus* Nees (Hymenoptera: Mymaridae), egg parasitoids of Homoptera. Syst. Entomol. 11: 213-219.

Mercet, R.G. 1912. Mimaridos Nuevos de Espana. Boln. Soc. Esp. Hist. Nat. 12: 331-337.

Milliron, H.E. 1947. Description of a new mymarid which parasites the eggs of the Saratoga Spittlebug. Ann. Ent. Soc. Amer. 40: 217-220.

Narayanan, E.S. and B.R. Subba Rao. 1961. Studies on Indian Mymaridae III. Beitr. Ent. 11: 655-670.

Nees, von Essenbeck, 1834. Hymenopterorum Ichneumonibus Affinium. Monogr., 448 pp.

New, T.R. 1976. The Australian species of *Polynema* Haliday s.l., (Hym.: Mymaridae) described by A.A. Girault. Aust. J. Zool. Suppl. Ser. 42: 1-65.

Noyes, J.S. 1982. Collecting and preserving chalcid wasps (Hymenoptera: Chalcidoidea). J. nat. Hist. 16: 315-334.

Ogloblin, A.A. 1934. Especies nuevas del genero *Erythmelus* Enock en la Republica Argentina (Hym. Mymaridae). Revta. Soc. ent. Argent. 6: 243-260.

Ogloblin, A.A. 1935*a*. Un nuevo Mimarido de Misiones (Hym. Mymaridae). Revta. Ent., Rio de J. 5: 59-64.

Ogloblin, A.A. 1935*b*. Especies nuevas o poco conocidas del genero *Gonatocerus* (Hym. Mymaridae) de la Republica Argentina. Revta. Soc. ent. Argent. 7: 65-78.

Ogloblin, A.A. 1935*c*. Dos especies nuevas del genero *Paranaphoidea* Gir. (Hym. Mymaridae). Revta. Ent., Rio de J. 5: 149-153.

Ogloblin, A.A. 1936. Las especies nuevas o poco conocidas del genero *Lymaenon* (Hal.) Walk. (*Gonatocerus* (1) *auct. nec* Nees) de la Republica Argentina (Hym. Mymaridae). Revta. Soc. ent. Argent. 8: 33-56.

Ogloblin, A.A. 1938*a*. Especies nuevas del subgenero *Gastrogonatocerus* Ogloblin (Genero *Lymaenon*, Mymaridae Hym.). Revta. Ent., Rio de J. 8: 93-106.

Ogloblin, A.A. 1938*b*. Description de una especie del genero *Xenomymar* Crawford (Mymaridae, Hymenoptera) Revta. Soc. ent. Argent. 1:97-100.

Ogloblin, A.A. 1939*a*. Un genero nuevo de la familia Mymaridae (Hymenoptera). Physis. 17: 217-225.

Ogloblin, A.A. 1939*b*. Las especies nuevas o poco del genero *Lymaenon* (Hal.) Mymaridae, (Hym.). Revta. Soc. ent. Argent. 10: 239-248.

Ogloblin, A.A. 1940. Dos Mymaridae nuevos de Misiones (Hym.). Revta. Ent., Rio de J. 11: 597-603.

Ogloblin, A.A. 1946. Descriptions of new genera and species of Mymaridae (Hym. Chalcid.). Iowa St. Coll. J. Sci. 20: 277-295.

Ogloblin, A.A. 1947. Las especies nuevas de "*Camptoptera*" de Misiones (Mymaridae, Hym.). Acta Zool. lilloana. 4: 493-509.

Ogloblin, A.A. 1949. Un nuevo genero de Mymaridae de la region Neotropica. Notas Mus. La Plata (Zool.). 14: 345-360.

Ogloblin, A.A. 1952. Los insectos de las islas Juan Fernandez. 12. Mymaridae (Hymenoptera). Revta. chil. Ent. 2: 119-138.

Ogloblin, A.A. 1953. Las especias nuevas del genero *Lymaenon* (Haliday) Walker (Mymaridae, Hymenoptera). Revta. Soc. ent. Argent. 16: 1-10.

Ogloblin, A.A. 1955*a*. Los nuevos representantes de la Fam. Mymaridae (Hym.) de la Republica Argentina. Boll. Lab. Zool. gen. Agr. Filippo Silvestri, Portici. 33: 377-397.

Ogloblin, A.A. 1955*b*. Las especies nuevas o poco conocidas del genero *Lymaenon* (Haliday) (Mymaridae, Hymenoptera). Rev. Soc. ent. Argent. 18: 17-22.

Ogloblin, A.A. 1955*c*. Los Mymaridae nuevos de la Republica Argentina (Hym.). Mitt. Much. Ent. Ges. 54-55: 492-502.

Ogloblin, A.A. 1956 (1957). Las especies argentina del genero *Lymaenon* (Halid.) Walk. (Mymaridae, Hymenoptera). Revta. Soc. ent. argent. 19: 33-43.

Ogloblin, A.A. 1957*a*. Los insectos de la Islas Juan Fernandez. 35. Mymaridae, Ceraphronidae, Diapriidae y Scelionidae. Revta. chil. Ent. 5: 413-444.

Ogloblin, A.A. 1957*b*. Species nuevas del genero *Xenomymar* Crawford. Neotropica. 3: 37-44.

Ogloblin, A.A. 1957*c*. La especias argentinas del genero *Lymaenon* (Halid.) Rev. Soc. ent. Argent. 19: 33-43.

Ogloblin, A.A. 1959*a*. Especies nuevas del genero *Lymaenon* Hal. (Mymaridae, Hymenoptera). Acta Zool. Lilloana. 17: 185-195.

Ogloblin, A.A. 1959*b*. Primera nota sobre los Mimarides de la Republica Ecuador. (Mymaridae, Hymenopt.). Mitt. Munch. Ent. Ges. 49: 43-62.

Ogloblin, A.A. 1959*c*. Dos especios nuevas del genero *Platypatasson* (Hym. Mymaridae) Revta. Soc. ent. Argent. 21: 71-76.

Ogloblin, A.A. 1960*a*. Las especies nuevas del gen. *Barypolynema* A. Ogl. (Hymenoptera, Mymaridae). Neotropica. 6(21): 71-80.

Ogloblin, A.A. 1960*b*. Los representantes nuevos de la tribu Polynematini de la Republica Argentina. (Hymenoptera, Mymaridae). Neotropica. 6: 1-11.

Ogloblin, A.A. 1960*c*. La estructura cefalica de los representante de familia Mymaridae (Hymenoptera). Actas y Trabajos del Primer Congreso Sudamericano de Zoologia, La Plata. 4: l09- 115.

Ogloblin, A.A. 1962. Nuevo subgenero del genero "*Anaphes*" Haliday (Mymaridae, Hymenoptera) de la Patagonia. Revta. Invest. Agri. Buenos Aires 16: 49-61.

Ogloblin, A.A. 1963*a*. Un nuevo genero de la familia Mymaridae (Hymenoptera) de la Republica Argentina. Neotropica. 9: 65-79.

Ogloblin, A.A. 1963*b*. Dos especies del genero *Barypolynema* de la Republica oriental del Uruguay. Revta. Soc. Urugaya. Ent. 5: 5-11.

Ogloblin, A.A. 1964. Una especie nueva del genero "*Stethynium*" Enock de la Provincia de Misiones Argentina (Mymaridae, Chalcidoidea, Hymenoptera). Acta Zool. lilloana. 20: 105-112.

Ogloblin, A.A. 1966. Un nuevo genero de la familia Mymaridae (Hymenoptera) de la Republica Argentina. Neotropica 9:I-VII, 65-79.

Ogloblin, A.A. 1967*a*. Mimarido nuevos de Argentina (Hymenopt. Mymaridae). Acta Zool. Lilloana. 22: 183-196.

Ogloblin, A.A. 1967*b*. Catalogo de los Himenopteros Argentinos de la serie Parasitica incluyendo Bethyloidea. Commun. Invest. Cienc., Prov. Bueno Aires, La Plata. 337 pp.

Ogloblin, A.A., and Annecke, D.P. 1961. Some new Mymaridae from South Africa and Argentina in the genus *Camptoptera* Foerster (Hymenoptera: Chalcidoidea). J. ent. Soc. sth. Afr. 24: 293-307.

Packard, A.S. 1864. The bumble bees of New England and their parasites, with notices of a new *Arthrophoribia* and a new genus of Proctotrupidae. Proc. Essex Inst. 4: 137-139.

Peck, O. 1951. *in* Muesebeck, *et al*. Hymenoptera of America north of Mexico. U.S. Dept. Agr., Agr. Monogr. 2: 410-594.

Peck, O. 1963. A catalogue of the Nearctic Chalcidoidea (Insecta, Hymenoptera). Can. Ent., Suppl. 30: 1-1092.

Peck, O., Z. Boucek, and A. Hoffer. 1964. Keys to the Chalcidoidea of Czechoslovakia (Insecta: Hymenoptera). Mem. Ent. Soc. Can. 34: 1-120.

Perkins, R.C.L. 1905. Leaf-hoppers and their natural enemies (pt. VI. Mymaridae, Platygasteridae). Rept. Hawaiian Sug. Plrs. Ass. Exp. Stn. 1: 187-205.

Perkins, R.C.L. 1912. Parasites of insects attacking sugar cane. Bull. Hawaiian Sug. Pl. Ass. Ent. Ser. 10: 1-27.

Pickles, A. 1932. Notes on the natural enemies of the sugarcane frog-hopper (*Tomaspis saccharina* Dist.) in Trinidad, with descriptions of new species. Bull. ent. Res. 23: 203-210.

Rasnitsyn, A. 1980. The origin and evolution of hymenopterous Insects. Academy of Sciences, USSR. Proc. Paleo. Inst. Publishing House "Nauka", 174: 1-191. (In Russian).

Riek, E.F. 1970. Chalcidoidea *in* Insects of Australia, CSIRO, Melbourne Univ. Press, Victoria.

Riley, C. V. 1889. Report of the Entomologist for the year 1888. Washington. pp. 53-144.

Risbec, J. 1952. La faune entomologique de cultures au Senegal et au Soudan francais. II. Contribution a l'etude des Proctotrupoidea. Trav. Lab. Ent. Sect. soudan Rech. agron. 2: 1-638.

Rondani, C. 1877, Vesparia parassita non vel minus cogita. Bull. Soc. ent. ital. 9: 166-213.

Prinsloo, G. L. *Chaetomymar gracile sp.n.* and *C.lepidum* (Hymenoptera: Mymaridae): egg parsoitoids of a cicadellid injurious to citrus in South Africa. Entomolophaga. 31: 347-350.

Schauff, M. 1981. A review of Nearctic species of *Acmopolynema* Ogloblin (Hymenoptera: Mymaridae). Proc. ent. Soc. Wash. 83: 444-460.

Schauff, M. 1983. A new genus of Mymaridae (Hymenoptera: Chalcidoidea) from the New World. Proc. ent. Soc. Wash. 85: 543-551.

Schauff, M. 1984. The holarctic genera of Mymaridae (Hymenoptera: Chalcidoidea). Mem. ent. Soc. Wash. 12: 1-67.

Schmiedeknecht, O. 1909. Hymenoptera fam. Chalcididae. *Genera Insectorum* 97: 1-558.

Schmiedeknecht, O. 1930. Die Hymenopteren Nord und Mitteleuropas Jen. 1-1062 pp.

Soares, O.M. 1942. Notas sobre parasitos do tomaterio, contendo a diagnose de *Anaphes tingitiphagus* n. sp. (Himenoptera-Chalcidoidea). Boln. Estac. nac. agron., Rio de J. 2: 259-267.

Soyka, W. 1937. Beitrage zur Klarung der europaischen Arten der Mymariden. Das Genus *Alaptus* Haliday. Natuurh. Maamdbl. Das Genus *Alaptus* Haliday. Maastricht. 26: 74-76.

Soyka, W. 1946. Beitrage zur Klarung der Europaischen arten und gattungen der Mymariden (Hym.: Chalcidoid). Zbl. Gesamtgeb. Entomol. 1: 177-185.

Soyka, W. 1947. Beitrage zur Klarung der Europaischen Arten und Gattungen der Mymariden (Hym. Chalcidoid.). Zebl. Gesamt-Geb. Ent.,Lienz 1: 177-185.

Soyka, W. 1949. Monographie der *Mymar*-Gruppe, mit den Gattungen *Mymar* Curtis, *Synanaphes* Soyka, *Ferrierella* Soyka, *Anaphoidea* Girault, *Hofenederia* Soyka, *Fulmekiella* Soyka, *Yungaburra* Girault (Hymenoptera, Chalcidoidea, Mymaridae). Revta. Ent., Rio de J. 20: 301-422.

Soyka, W. 1950. Drei neue Mymaridengattungen. Ent. Nachr., 3: 120-125.

Soyka, W. 1953. Die Gattung *Stichothrix* Foerster (Hymen., Chalcid., Mymaridae). Natuurh. Maandbl. Maastricht. 42: 57-60.

Soyka, W. 1956. Monographie der *Polynema* Gruppe. Abh. zool. - Bot. Ges. Wien 19: 1-115.

Subba Rao, B.R. 1970. Descriptions of new genera and species of Mymaridae (Hymenoptera) from the Far East and the Ethiopian Region. Bull. ent. Res. 59: 659-670.

Subba Rao, B.R., and H. Hayat. 1983. Key to genera of Oriental Mymaridae, with a preliminary catalog (Hymenoptera: Chalcidoidea). Contrib. Amer. Ent. Inst. 20: 125-150.

Subba Rao, B.R., and M. Hayat. 1984. The Chalcidoidea (Insecta: Hymenoptera) of India and adjacent countries. Part I. Reviews of families and keys to families and genera. Orient. Insects. 19: 163-310.

Sveum, P. 1982. Taxonomical studies on Mymaridae (Hymenoptera) from Malaysia. Ent. Scand. 13: 81-87.

Taguchi, H. 1971. Mymaridae of Japan. I. (Hymenoptera: Chalcidoidea). Trans. Shikoku ent. Soc. 11: 49-59.

Taguchi, H. 1972. Some new species of the genera *Camptoptera* and *Ptilomymar* from Bohol I., Philippines (Hymenoptera: Mymarinae). Kontyu. 40: 223-230.

Taguchi, H. 1975. Two new *Chaetomymar* species from Japan and Taiwan (Hymenoptera: Mymaridae). Trans. Shikoku ent. Soc. 12: 111-114.

Taguchi, H. 1977. Two new species of the genus *Camptoptera* from Taiwan (Hymenoptera: Mymaridae). Trans. Shikoku ent. Soc. 13: 143-146.

Tryapitzin, V.A. 1978. Mymaridae *in* Keys to the fauna of the European Part of USSR, Hymenoptera, Nauka, Lenningrad Branch. Part II. 3: 516-538.

Viggiani, G. 1970. Description of the male *Eustochus atripennis* Hal. 1833, and the new terricolous species of *Cleruchus* Enock, with remarks on *Anagrella* Bkdf. (Hym., Mymaridae). Mitt. schweiz. ent. Ges. 43: 135-142.

Viggiani, G. 1973*a*. Richerche sugli Hymenoptera Chalcidoidea XXXVIII. Descrizione del maschio di *Litus* Haliday (1883) (Mymaridae). Boll. Lab. Ent. agr. Filippo Silvestri, Portici. 30: 231-234.

Viggiani, G. 1973*b*. Ricerche sugli Hymenoptera Chalcidoidea XXXVII. Note su alcuni generi de Mimaridi australiani descritti da A.A. Girault. Boll. Lab. Ent. agr. Filippo Silvestri, Portici. 30: 253-268.

Viggiani, G. 1974. Richerche sugli Hymenoptera Chalcidoidea XLII. Nuovi Mimaridi de Ceylon (*Captopteroides armata*, n. gen. e n. sp., *Ptilomymar besucheti* n. sp.) Boll. Soc. Ent. agr. Filippo Silvestri, Portici. 31: 23-29.

Viggiani, G. 1978. New species of *Camptoptera* Foerster (Hym., Mymaridae). Revue. Suisse Zool. 85: 151-156.

Walker, F. 1846. Descriptions of the Mymaridae. Ann. Mag. nat. Hist. 18: 49-54.

Walker, I. 1879. Some British species of *Anagrus* (Hymenoptera: Mymaridae). Zool. J. Linn. Soc. Lond. 67: 181-202.

Ward, A.O. 1875. Description of a new species of Proctotrupidae from Ceylon. Entomologist's mon. Mag. 11: 197.

Walley, G.S. 1929. Descriptions of new Canadian parasitic Hymenoptera. Can. Ent. 61: 190-194.

Waterhouse, C.O. 1913. On a new species of Mymaridae from Trinidad. Bull. ent. Res. 4: 87.

Westwood, J.O. 1839. An introduction to the modern classification of insects. 1: 1-462. London.

Westwood, J.O. 1840. An introduction to the modern classification of insects. 2: 1-587. London.

Westwood, J.O. 1878. Descriptions of some minute Hymenopterous insects. Trans. Linn. Soc. Lond. l: 583-593.

Whittaker, O. 1931. Four new species of Mymaridae from British Columbia (Hymenoptera). Proc. Ent. Soc. Wash. 33: 189-192.

Yoshimoto, C.M. 1967. The phylogeny and zoogeography of the endemic genera of the Hawaiian Pteromalidae (Hymenoptera: Chalcidoidea). Pacif. Insects. 9: 97-203.

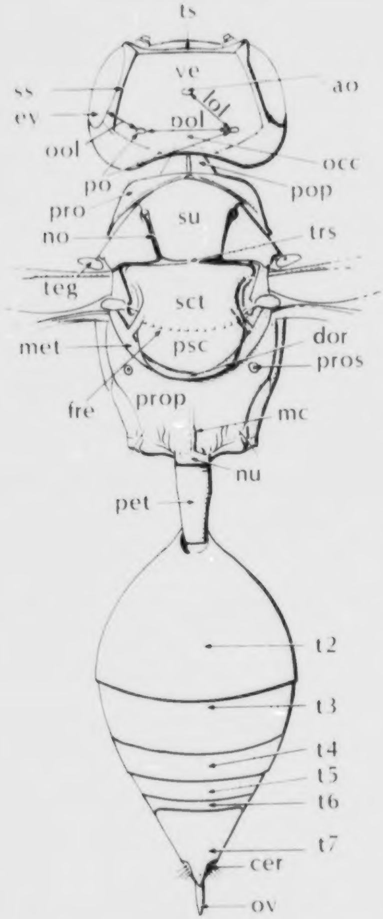
Yoshimoto, C.M. 1971. A new genus of mymarid wasp (Hymenoptera, Chalcidoidea: Mymaridae) from New Brunswick, Canada. Can. Ent. 103: 1079-1082.

Yoshimoto, C.M. 1975. Cretaceous chalcidoid fossils from Canadian amber. Can. Ent. 107: 499-528.

Yoshimoto, C.M., M.A. Kozlov, and V.A. Tryapitzin. 1972. A new subfamily of Mymaridae (Hymenoptera, Chalcidoidea) Ent. obozr. 51: 878-885.

List of Abbreviations used in figures

ao - anterior ocellus
ax - axilla
cer - cercus
cl - club
cyp - clypeus
di - disc
dgs - distal group sensilla
dm - distal macrochaeta
dor - dorsellum
ey - eye
fa - faces
fc - fore coxa
fe - femur
fre - frenal groove
fro - frons
fs - frontal sutures
fu - funicle
ga - gaster
ge - gena
hc - hind coxa
hy - hypochaeta
lol - lateral ocellar line
ma - mandible
mac - marginal cilia
mag - marginal vein
mc - median carina
mco - mid coxae
mes - mesosoma
mesot - mesothoracic spiracle
mep - mesopleuron
met - metanotum
mi - microchaeta
no - notaulus
nu - nucha
occ - occiput
ool - ocular ocellar line
ov - ovipositor
pd - pedicle
pet - pedicle
pet - petiole
pf - post frontal suture
pm - proximal macrochaeta
po - posterior ocellus
pol - posterior ocellar line
pop - propleuron or "neck region"
pre - prepectus
pro - pronotum
prop - propodeum
pros - propodeal spiracle
psc - posterior scutellum
ra - radicula
bs - subantennal suture
sc - scape
sct - scutellum
sr - sensory ridge
st - stigmal vein
tm - stemmaticum
ss - supraorbital suture
su - scutum
sub - subcosta
sum - submarginal
t1, t2 - metasomal terga
ta - tarsus
teg - tegula
tib - tibia
to - torulus
tro - trochanter
rs - transscutal suture
ts - transverse suture
sp - tibial spur
ve - vertex


ts
ss
ve
ao
ev
lol
pol
ool
occ
po
pop
pro
su
no
trs
teg
sct
met
dor
psc
pros
fre
prop
mc
nu
pet
t2
t3
t4
t5
t6
t7
cer
ov

1

Plate 1 Fig. 1 - Female mymarid (composite drawings from several specimens of different genera, but mainly *Polynema*), dorsal habitus.

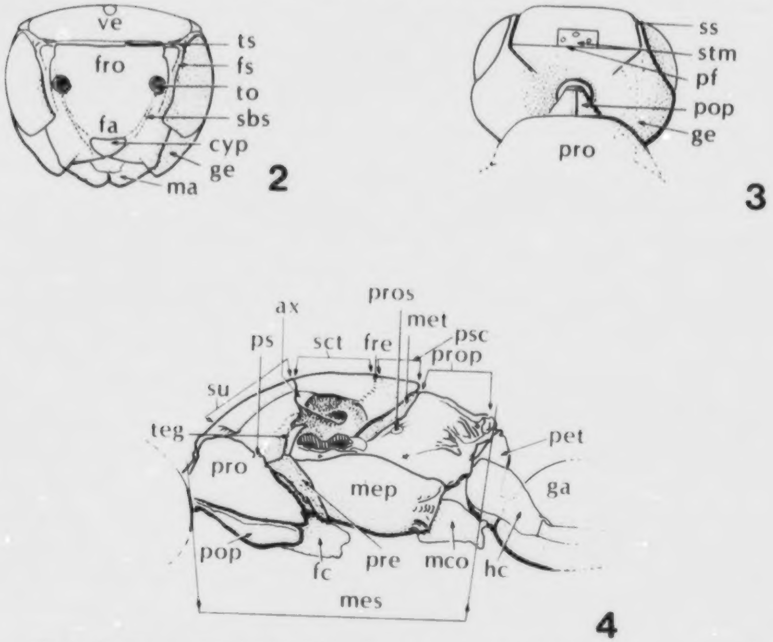

ve
ts
fro
fs
to
fa
sbs
cyp
ge
ma
2
ss
stm
pf
pop
ge
pro
3
pros
ax
met
ps
sct
fre
psc
prop
su
teg
pet
pro
mep
ga
pop
fc
pre
mco
hc
mes
4

Plate 2 Fig. 2 - Female mymarid, frontal view of head; 3 - vertex and posterior view of head; 4 - lateral view of mesosoma.

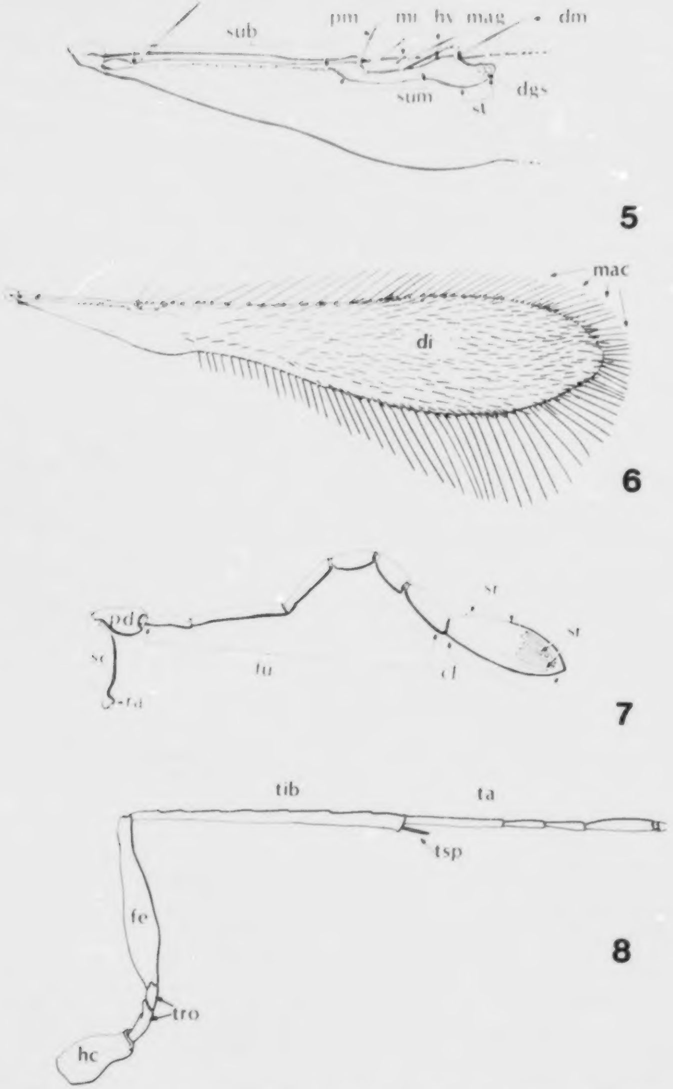

sub
pm
mt
hv
mag
dm
dgs
sum
st
5
mac
di
6
st
pd
st
sc
fu
cl
ra
7
tib
ta
tsp
fe
tro
hc
8

Plate 3 Fig. 5 - Female mymarid, fore wing venation; 6 - fore wing; 7 - antenna; 8 - hind leg.

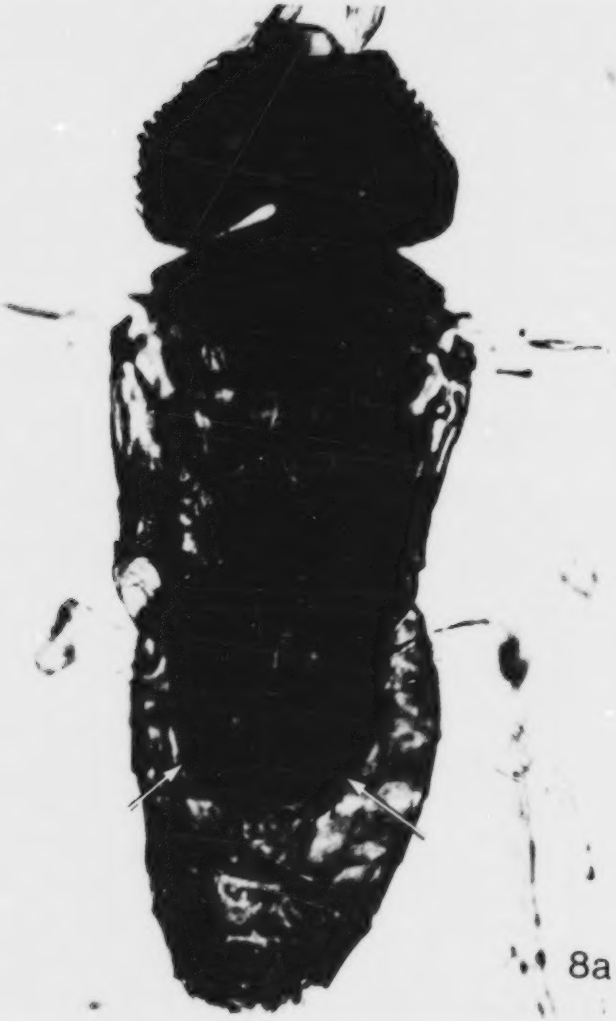


Plate 3A Fig. 8a - *Alaptus* sp., dorsal habitus showing mesophragma.

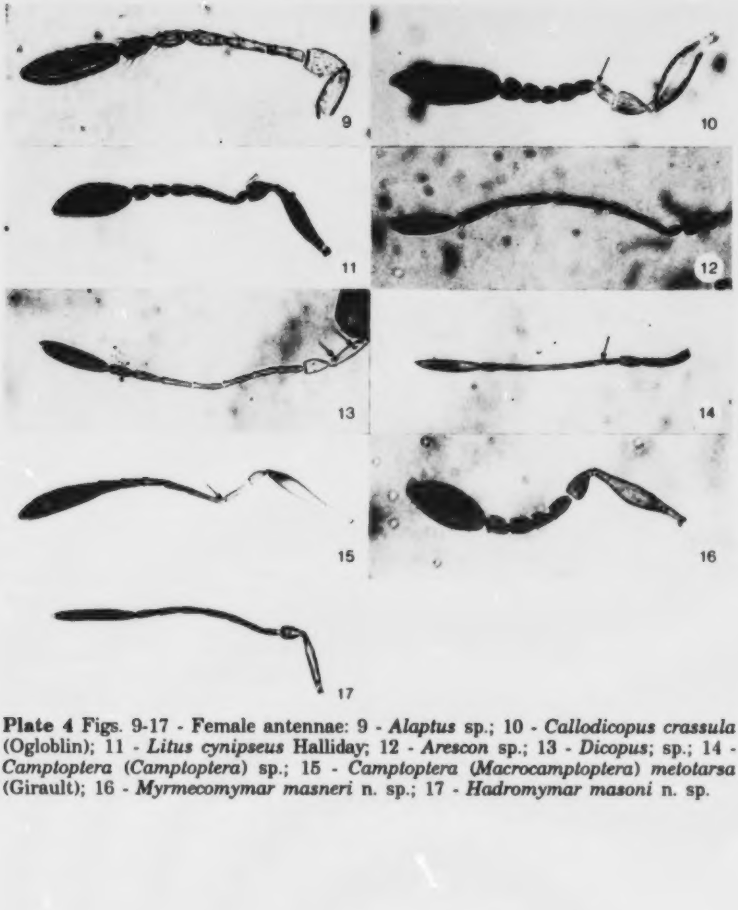


Plate 4 Figs. 9-17 - Female antennae: 9 - *Alaptus* sp.; 10 - *Callodicopus crassula* (Ogloblin); 11 - *Litus cynipseus* Halliday; 12 - *Arescon* sp.; 13 - *Dicopus*; sp.; 14 - *Camptoptera* (*Camptoptera*) sp.; 15 - *Camptoptera* (*Macrocamptoptera*) *metotarsa* (Girault); 16 - *Myrmecomymar masneri* n. sp.; 17 - *Hadromymar masoni* n. sp.

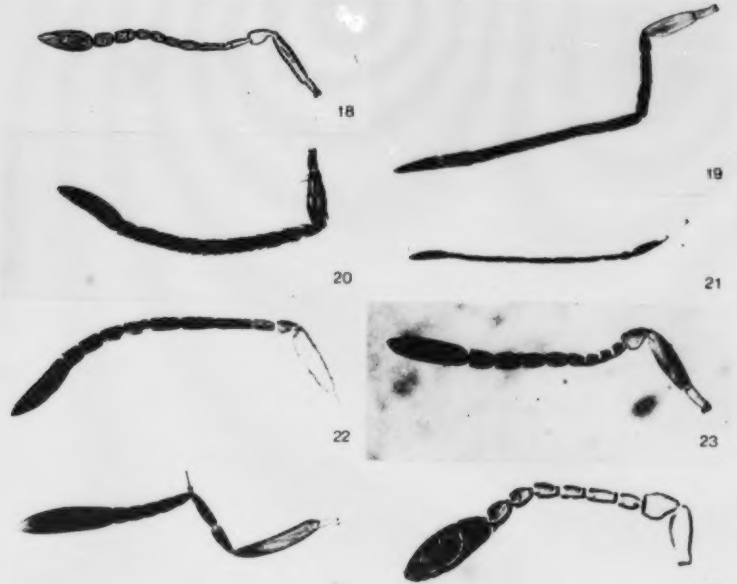


Plate 5 Figs. 18-25 - **Female antennae:** 18 - *Ooctonus* sp.; 19 - *Gonatocerus* sp.; (*membraciphagus* group) 20 - *Gonatocerus masneri* n. sp. (*masneri* group); 21 - *Gonatocerus mexicanus* Perkins (*sulphuripes* group); 22 - *Gonatocerus morrilli* (Howard) (*ater* group); 23 - *Gonatocerus* sp. (*litoralis* group); 24 - *Anagroidea boweni* n. sp.; 25 - *Stethynium* sp.

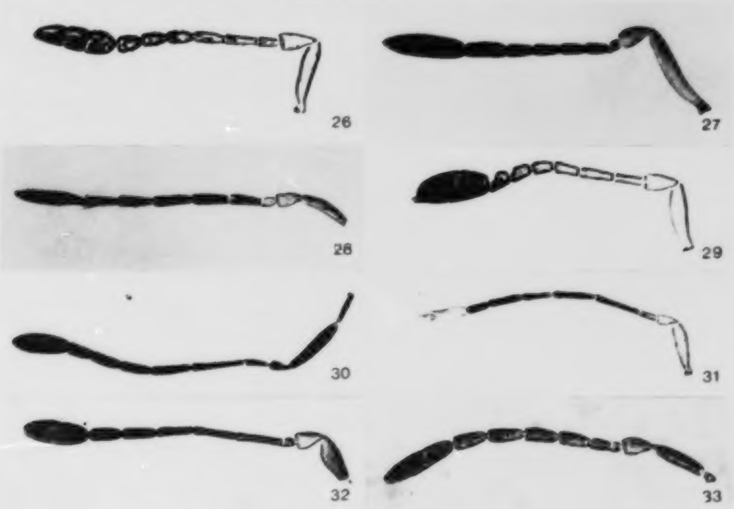


Plate 6 Figs. 26-33 - Female antenna: 26 - *Notomymar masneri* n. sp.; 27 - *Erythmelus* sp.; 28 - *Anagrus* sp.; 29 - *Omymymar slivanum* (Ogloblin); 30 - *Australomymar* sp.; 31 - *Caenomymar howdeni* n. sp.; 32 - *Anaphes* (*Anaphes*) sp.; 33 - *Anaphes* (*Patasson*) sp.

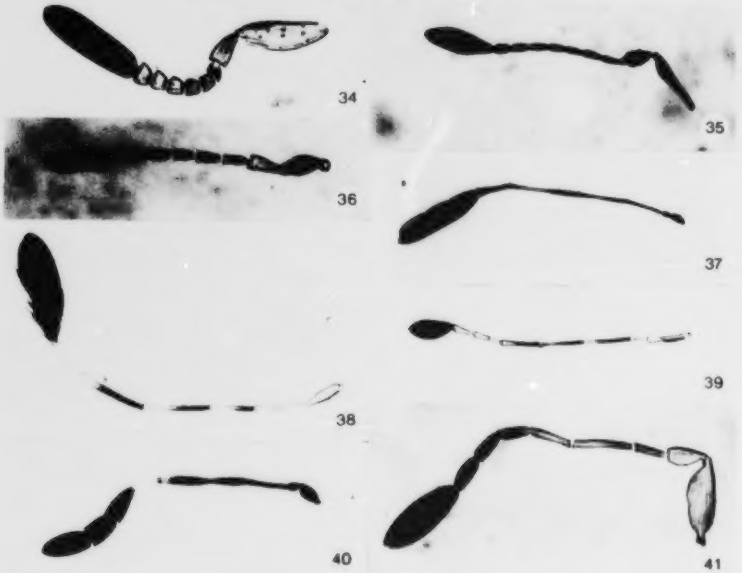


Plate 7 Figs. 34-41 - Female antennae: 34 - *Cleruchus* sp.; 35 - *Ptilomymar magnificum* n. sp.; 36 - *Eustochus nearcticus* n. sp.; 37 - *Tanaomymar venezuelaensis* n. sp.; 38 - *Bruchomymar* sp.; 39 - *Neomymar* sp.; 40 - *Erdosiella* sp.; 41 - *Entrichopteris eberhardi* n. sp.

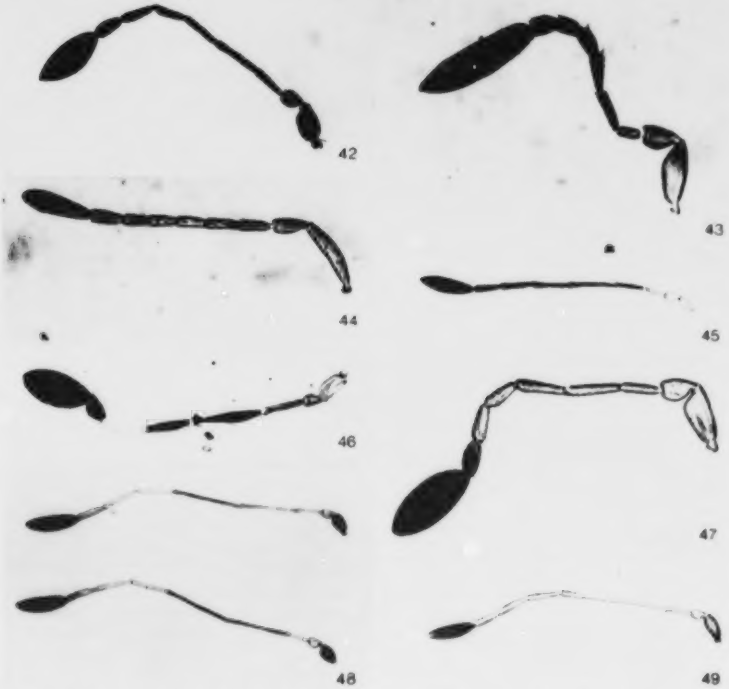


Plate 8 Figs. 42-49 - Female antennae: 42 - *Masonana polynemoides* n. sp.; 43 - *Restisoma howdeni* n. sp.; 44 - *Caraphractus* sp.; 45 - *Cnecomymar* sp.; 46 - *Tanyostethium elongatum* n. sp.; 47 - *Acmopolynema bifasciatipennis* Ogloblin; (*bifasciatipennis* group) 48 - *Acmopolynema helavai* n. sp. (*helavai* group); 49 - *Acmopolynema pecki* n. sp. (*pecki* group).

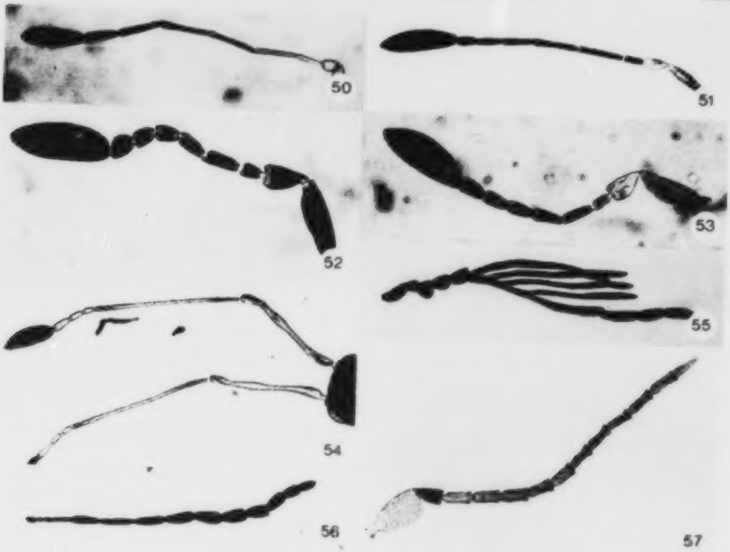


Plate 9 Figs. 50-57 - Female antennae: 50 - *Acmopolynema plaumanni* n. sp. (*plaumanni* group); 51 - *Platyfrons helavai* n. sp.; 52 - *Formicomymar*; *venezuelaensis* n. sp.; 53 - *Polynema* sp.; 54 - *Mymar* sp.; Figs. 55-57 - Male antenna: 55 - *Gonatocerus helavai* n. sp. (*ater* group); 56 - *Tanaomymar venezuelaensis* n. sp.; 57 - *Omymymar silvanum* (Ogloblin).

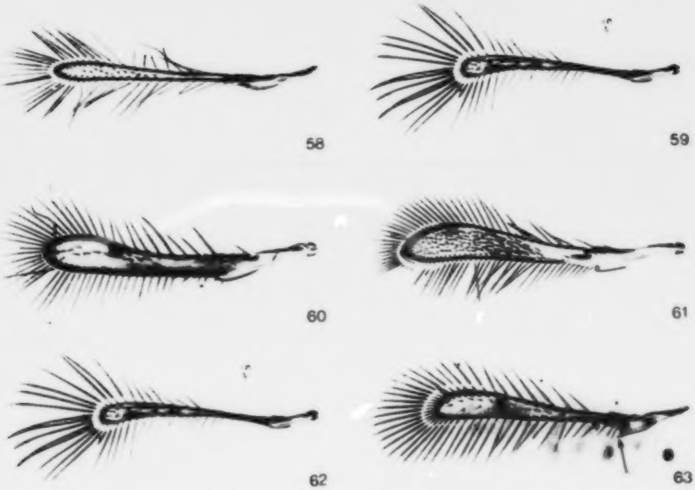


Plate 10 Figs. 58-63 - Fore wings: 58 - *Litus cynipseus* Haliday; 59 - *Dicopus* sp.; 60 - *Arescon* sp.; 61 - *Hadromymar masoni* n. sp.; 62 - *Camptoptera* (*Camptoptera*) sp.; 63 - *Alaptus* sp.

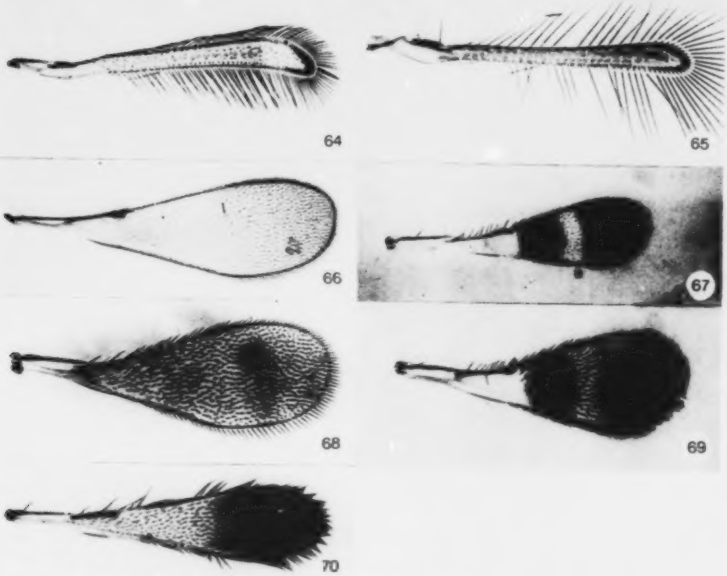


Plate 11 Figs. 64-70 - Fore wings: 64 - *Camptoptera (Macrocamptoptera) metotarsa* (Girault); 65 - *Callidocapus crassula* (Ogloblin); 66 - *Gonatocerus* sp.; (*membraciphagus* group); 67 - *Gonatocerus helavai* n. sp. (*ater* group); 68 - *Gonatocerus* sp. (*litoralis* group); 69 - *Gonatocerus masneri* n. sp. (*masneri* group); 70 - *Gonatocerus mexicanus* Perkins (*sulphuripes* group).

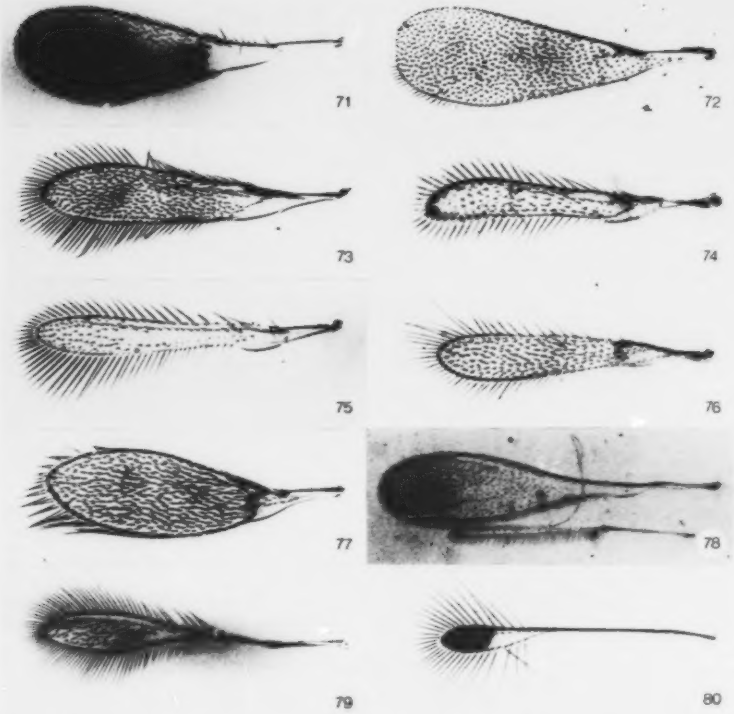


Plate 12 Figs. 71-80 - Fore wings: 71 - *Gonatocerus morrilli* (Howard) (*ater* group); 72 - *Omyommar* sp.; 73 - *Anaphes* (*Anaphes*) sp.; 74 - *Anaphes* (*Patasson*) sp.; 75 - *Cleruchus* sp.; 76 - *Ptilomymar magnificus* n. sp.; 77 - *Eustochus nearcticus* n. sp.; 78 - *Tanaomymar venezuelaensis* n. sp.; 79 - *Bruchomymar* sp.; 80 - *Mymar* sp.

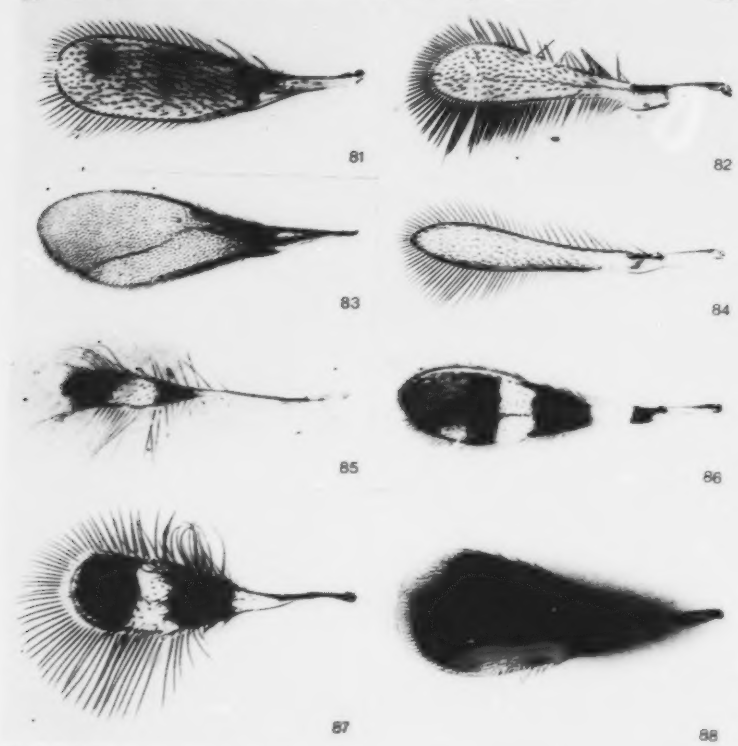


Plate 13 Figs. 81-88 - Fore wings: 81 - *Anagroidea boweni* n. sp.; 82 - *Anagrus* sp.; 83 - *Australomymar* sp.; 84 - *Caenomymar howdeni* n. sp.; 85 - *Neomymar* sp.; 86 - *Erdosiella* sp.; 87 - *Entricopteris eberhardi* n. sp.; 88 - *Masonana polynemoides* n. sp.

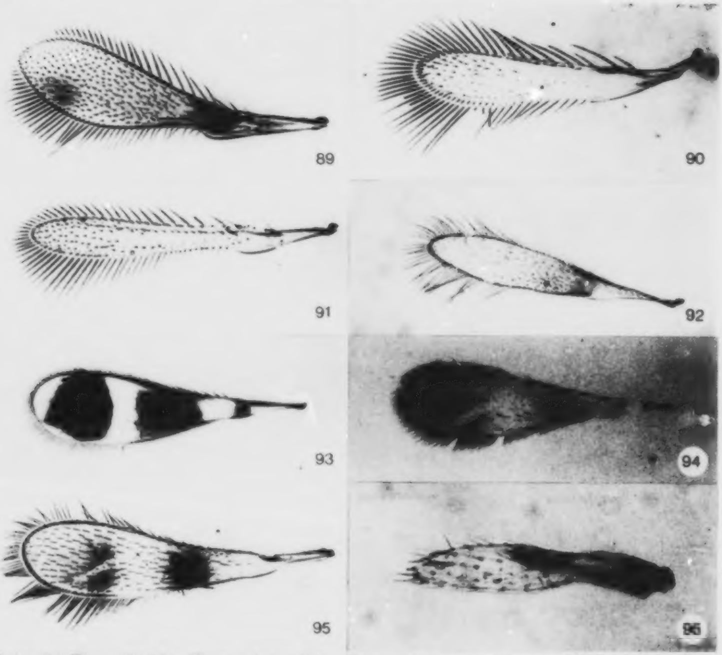


Plate 14 Figs. 89-96 - Fore wings: 89 - *Stethynium* sp.; 90 - *Erythmelus* sp.; 91 - *Omymymar silvanum* (Ogloblin); 92 - *Caraphractus* sp.; 93 - *Acmopolynema helavai* n. sp. (*helavai* group); 94 - *Acmopolynema pecki* n. sp. (*pecki* group); 95 - *Acmopolynema plaumanni* n. sp. (*plaumanni* group); 96 - *Formicomymar venezuelaensis* n. sp.

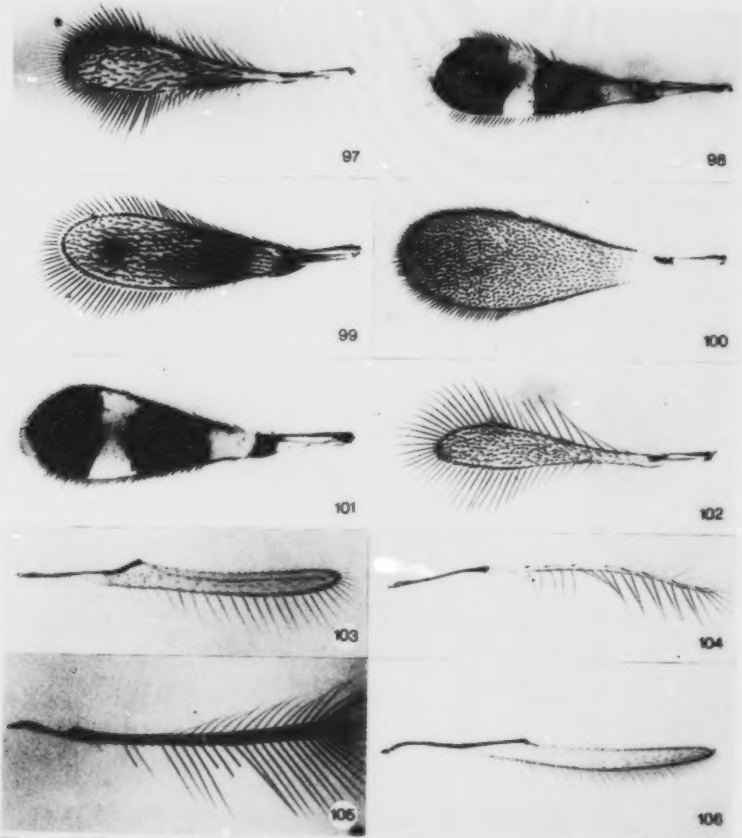
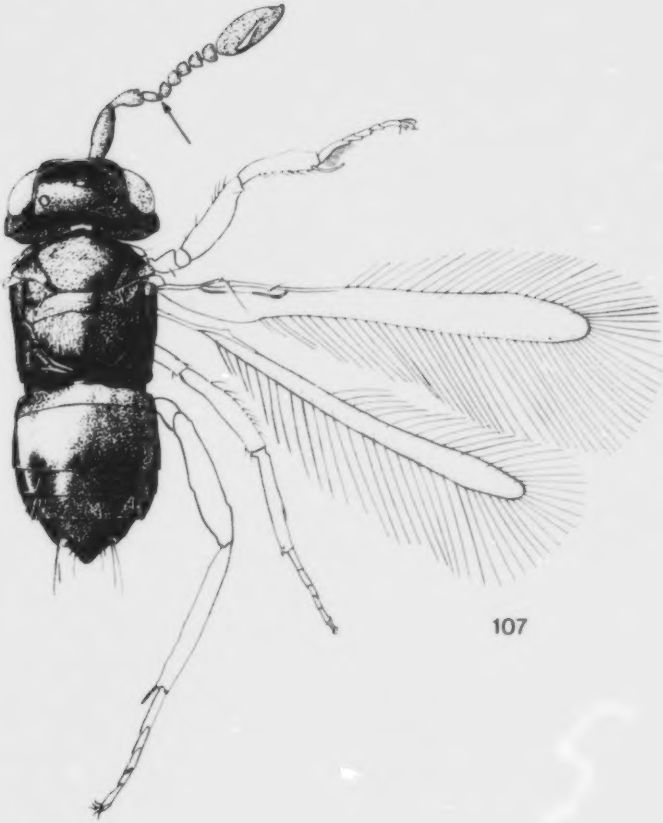
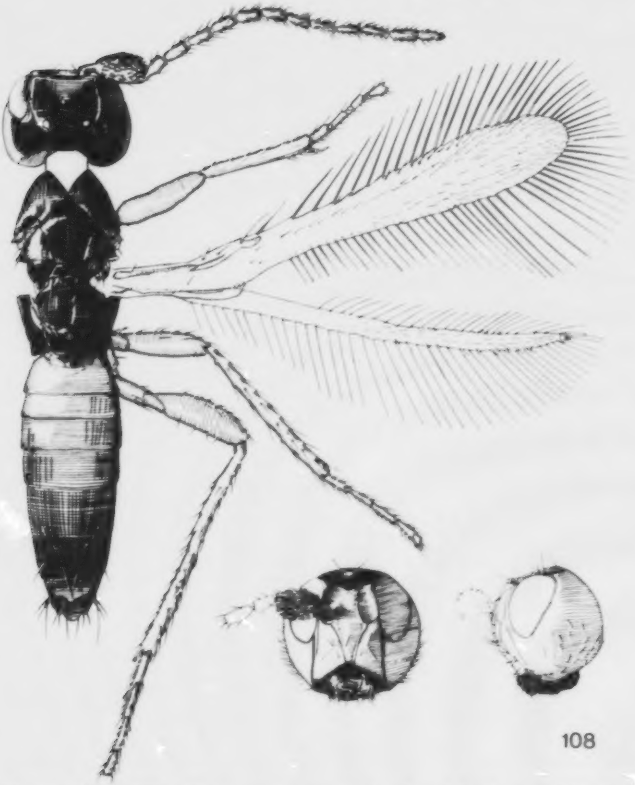


Plate 15 Figs. 97-102 - Fore wings: 97 - *Cnecomymar* sp.; 98 - *Acmopolynema bifasciatipennis* Ogloblin; (*bifasciatipennis* group); 99 - *Restisoma howdeni* n. sp.; 100 - *Platyfrons helavai* n. sp.; 101 - *Tanyostethium elongatum* n. sp.; 102 - *Polynema* sp.; Figs. 103-106- Hind wings: 103 - *Anagroidea boweni* n.sp.; 104 - *Cneomymar* sp.; 105 - *Callodicopus crassula* (Ogloblin); 106 - *Gonatocerus* sp.



107

Plate 16 Fig. 107 - *Callodicopus crassula* (Ogloblin); female habitus.



108

Plate 17 Fig. 108 - *Omyomymar* sp.: male, dorsal habitus and head, frontal and lateral views.

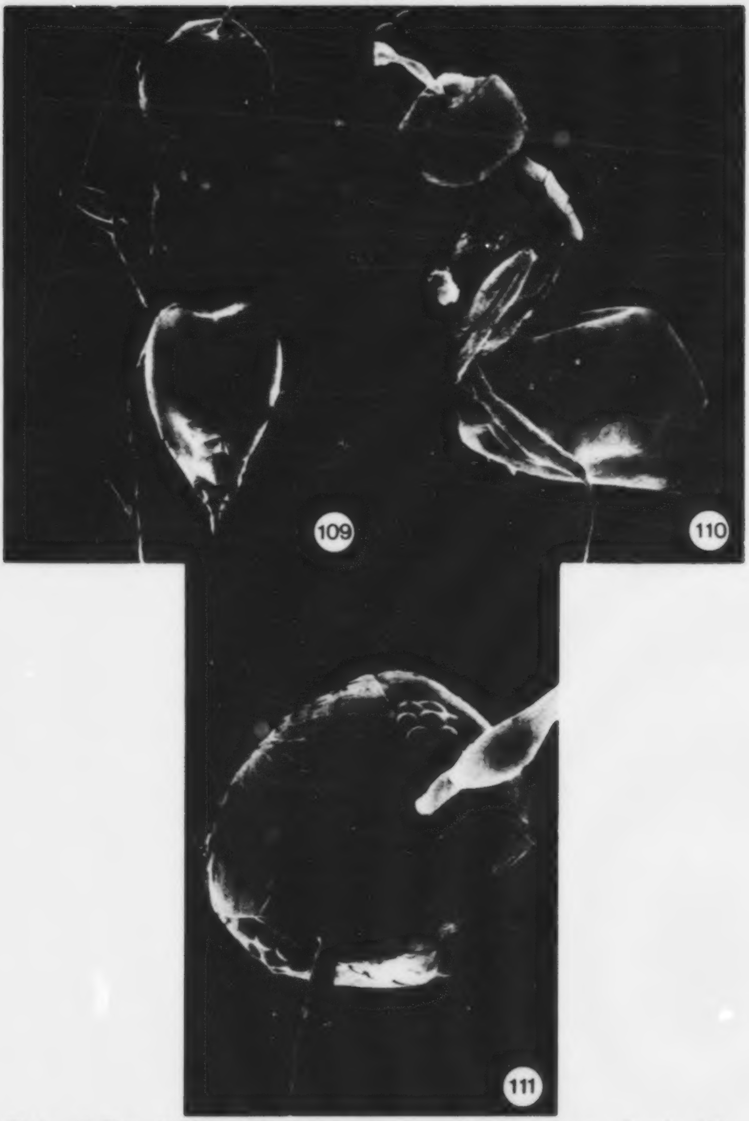


Plate 18 **Figs.** 109-111 - *Myrmecomymar masneri* n. gen., n. sp.: female; 109 - dorsal habitus; 110 - lateral habitus; 111 - face.

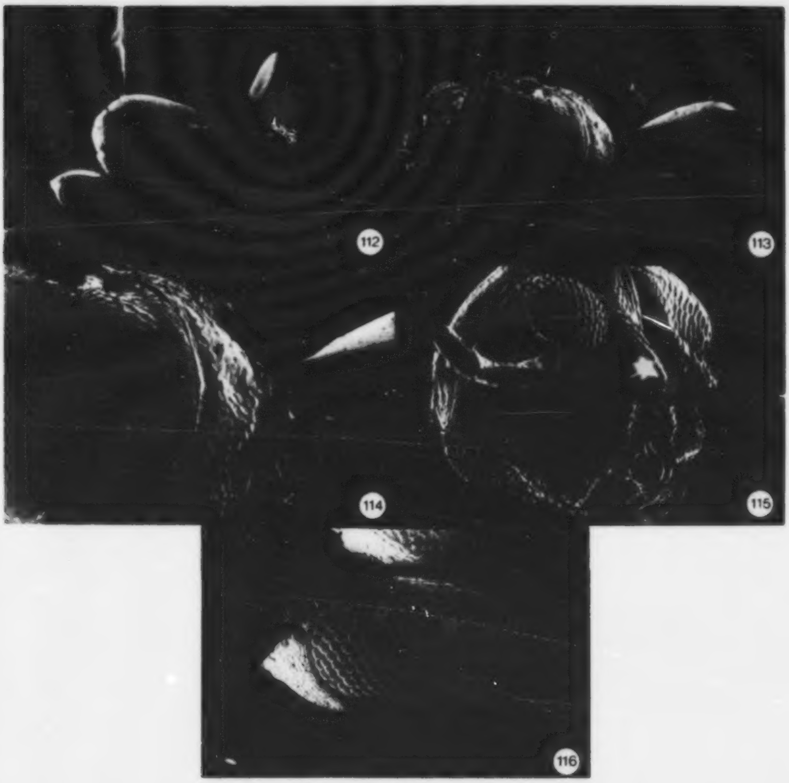


Plate 19 Figs. 112-116 - *Camptoptera* (*Macrocamptoptera*) *metotarsa* (Girault): female; 112 - lateral habitus; 113 - dorsal habitus; 114 - mesosoma, posterior part; 115 - head, frontal view; 116 - head, lateral view.

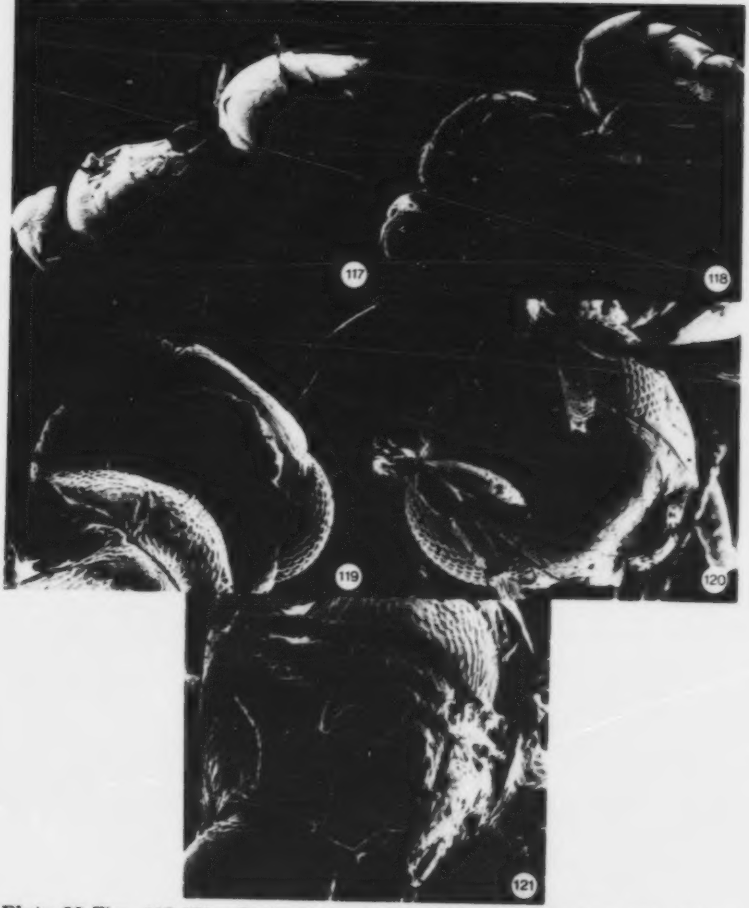


Plate 20 Figs. 117-121 - *Ooctonus* sp.: female; 117 - dorsal habitus; 118 - lateral habitus; 119 - head, posterodorsal view; 120 - head, anterodorsal view; 121 - propodeum.

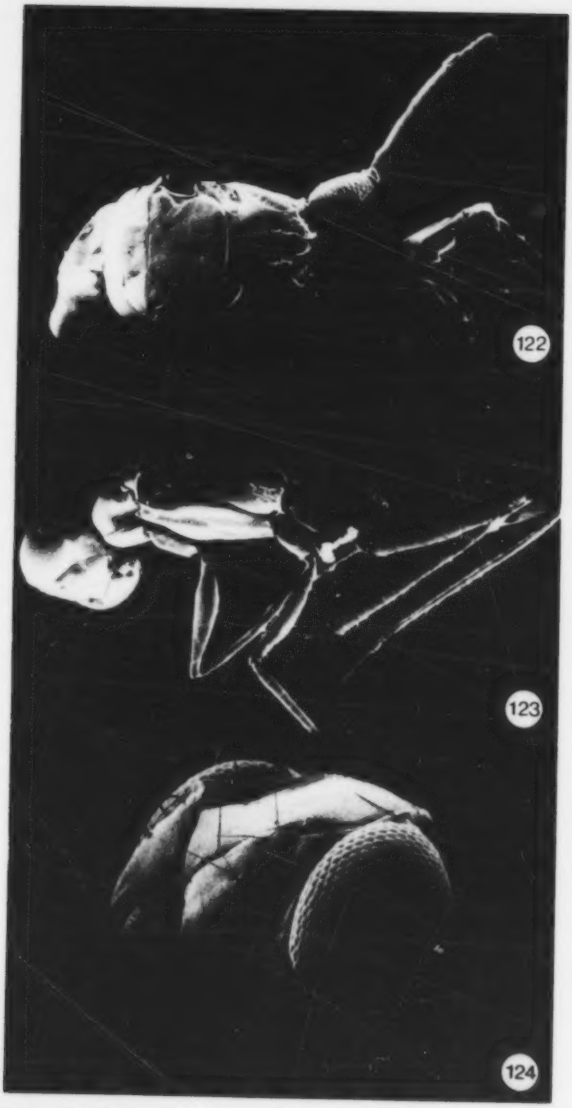


Plate 21 Figs. 122-124 - *Gonatocerus helavai* n. sp. (*ater* group): 122 - dorsal habitus; 123 - lateral habitus; 124 - face.

Plate 22 Figs. 125-127 - *Gonatocerus masneri* n. sp. (*masneri* group): 125 - dorsal habitus; 126 - lateral habitus; 127 - face.

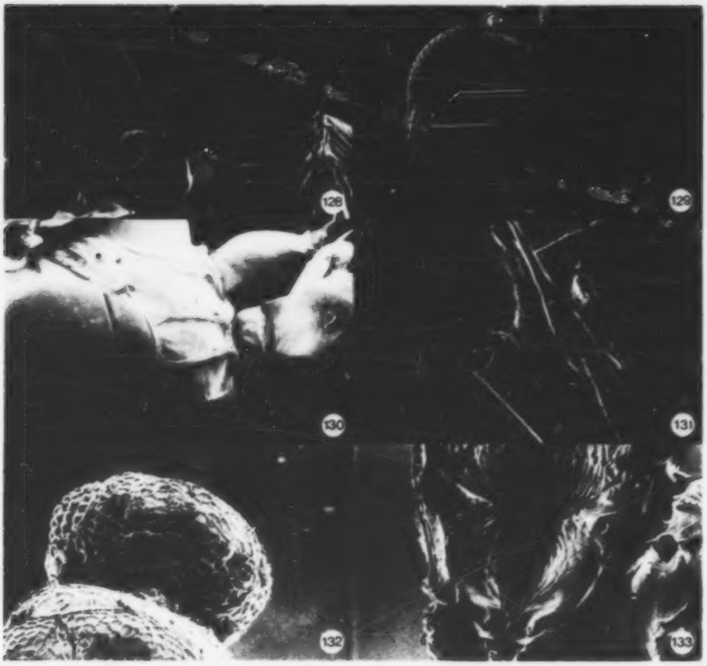


Plate 23 Figs. 128-129 - *Gonatocerus mexicanus* Perkins (*sulphuripes* group): female; 128 - propodeum; 129 - face; 130 - *Gonatocerus* sp. (*ater* group): female, propodeum; 131 - *Hadromymar masoni* n. gen., n. sp.: female, propodeum; 132 - *Anagroidea boweni* n. sp.: female, head, posterodorsal view; 133 - propodeum.

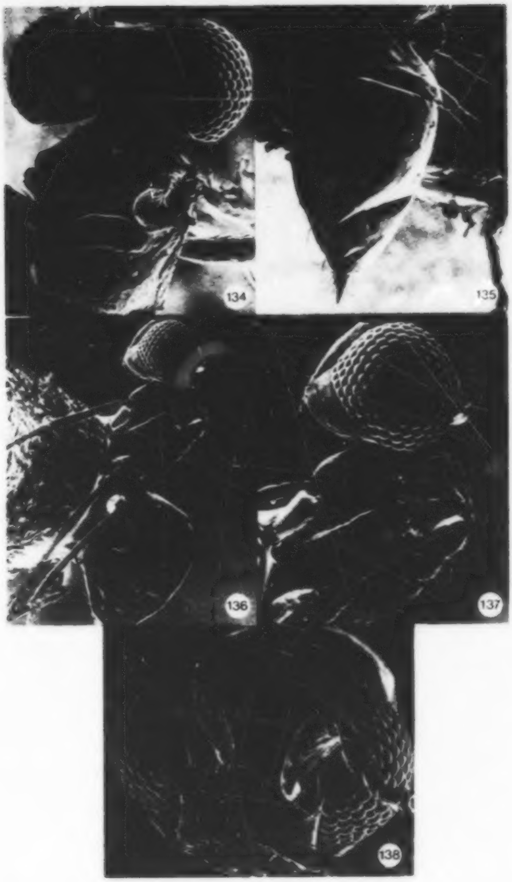


Plate 24 Figs. 134-138 - *Idiocentrus* sp.: female; 134 - head and mesosoma, dorsal view; 135 - metasoma; 136 - lateral habitus; 137 - head and mesosoma, lateral view; 138 - frontal view.

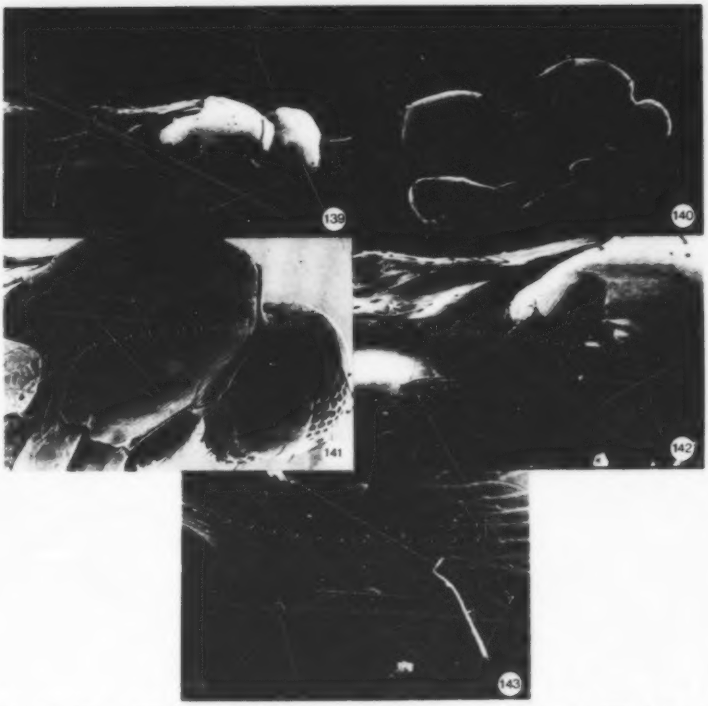


Plate 25 Figs. 139-143 - *Ptilomymar magnificum* n. sp.: female; 139 - dorsal habitus; 140 - lateral habitus; 141 - head and mesosoma, lateral view; 142 - propodeum and base of metasoma; 143 - mesosomal spiracle.

144
145
146
147
148
149

Plate 26 Figs. 144-145 - *Notomymar masneri* n. sp.: female; 144 - head and mesosoma, dorsal view; 145 - propodeum; 146 - *Erythmelus* sp.: female, lateral; habitus; Figs. 147-148 - *Eustochus nearcticus* n. sp.: female; 147 - head and mesosoma, lateral view; 148 - propodeum; 149 - *Tanaomymar venezuelaensis* n. sp: female, dorsolateral habitus.

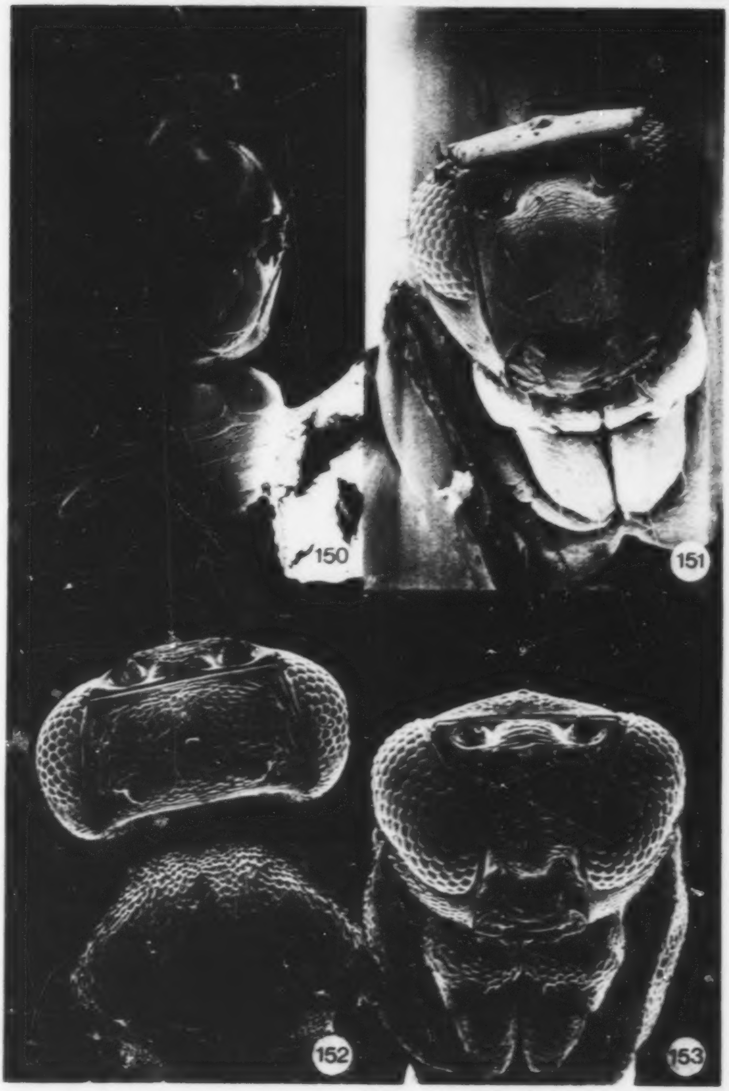


Plate 27 Figs. 150-151 - *Anaphes (Anaphes)* sp.: female; 150 - dorsal habitus; 151 -face; Figs. 152-153 - *Caraphractus cinctus* Walker: female; 152 - head; and anterior mesosoma, dorsal view; 153 - face.

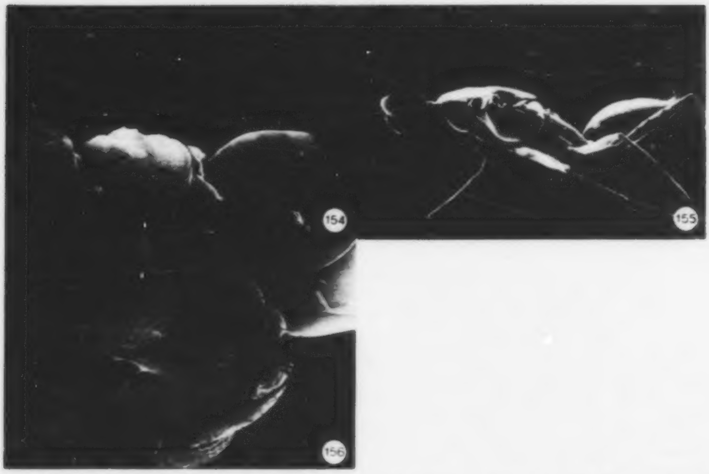


Plate 28 Figs. 154-156 - *Cnecomymar* sp.: female; 154 - dorsal habitus; 155 - lateral habitus; 156 - face.

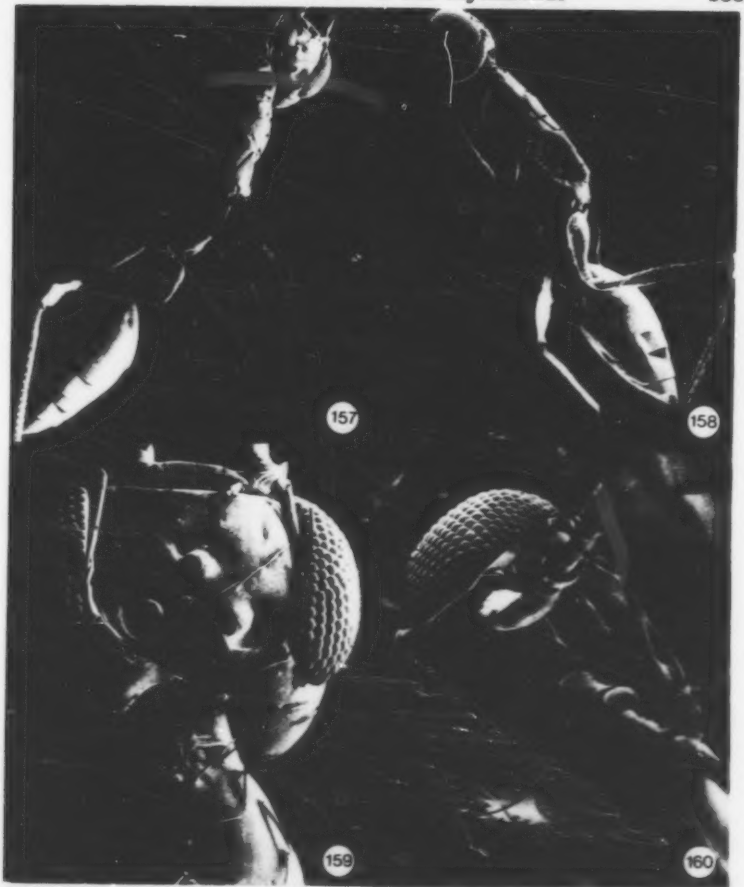


Plate 29 Figs. 157-160 - *Bruchomymar* sp.: dorsal habitus; 158 - lateral habitus; 159 - dorsal view of head; 160 - face.

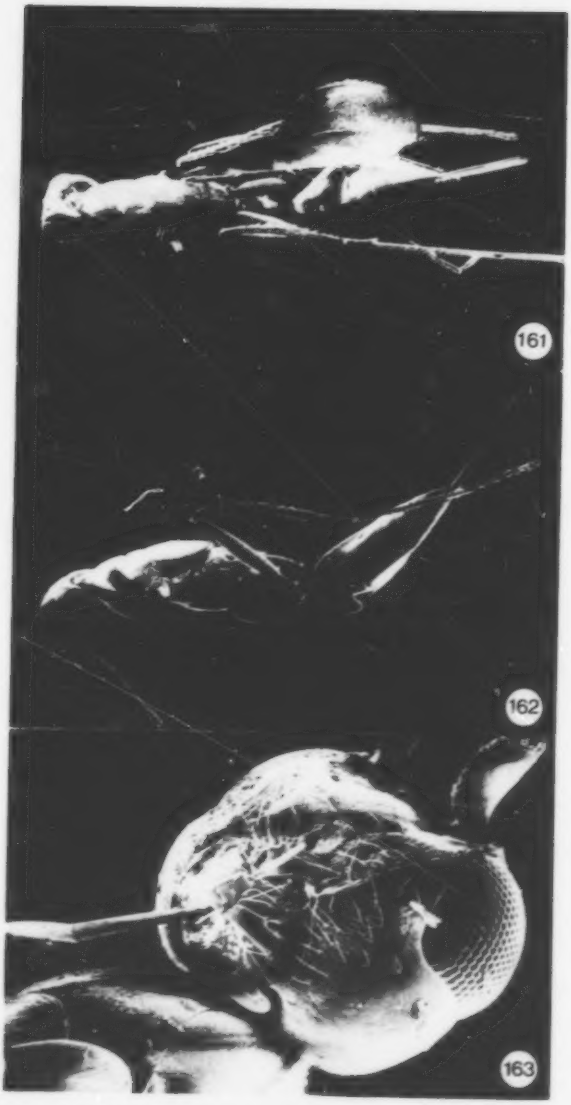


Plate 30 Figs. 161-163 - *Erdosiella* sp.: female; 161 - dorsal habitus; 162 - lateral habitus; 163 - face.

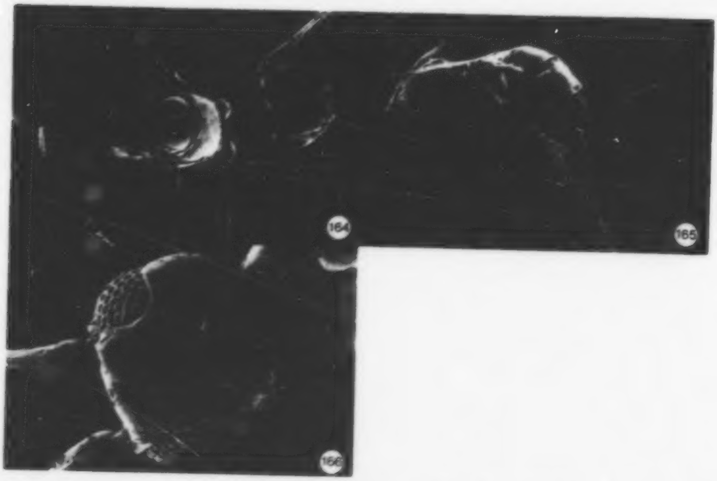


Plate 31 Figs. 164-166 - *Mymar* sp.: female; 164 - dorsal habitus; 165 - lateral habitus; 166 - face.

167
168
169
170

Plate 32 Figs. 167-170 - *Neomymar* sp.: female; 167 - dorsal habitus; 168 - lateral habitus; 169 - face and mouthparts; 170 - propodeum.

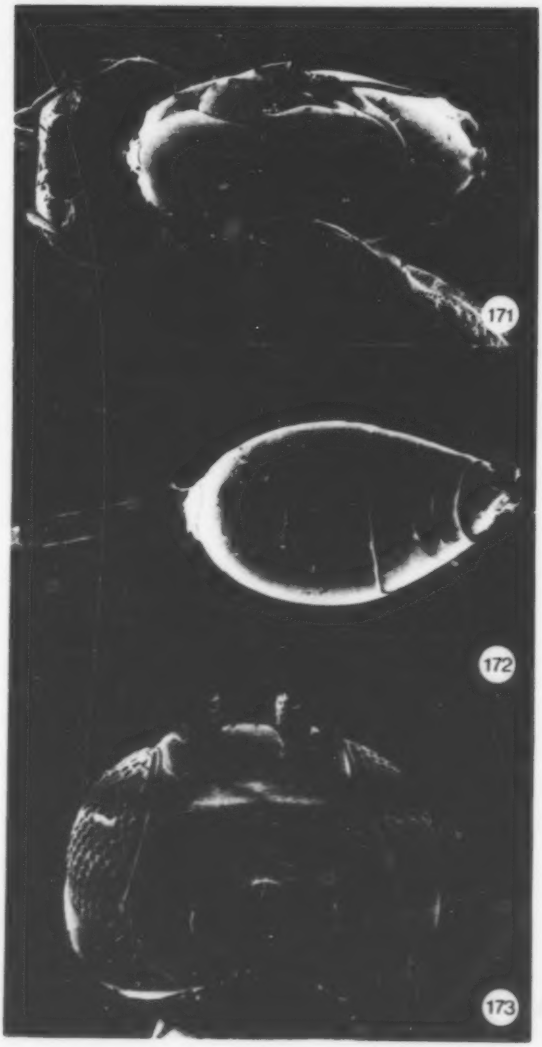


Plate 33 Figs. 171-173 - *Masonana polynemoides* n. gen., n. sp.: female; 171 - dorsal habitus; 172 - metasoma, dorsal view; 173 - head, dorsal view.

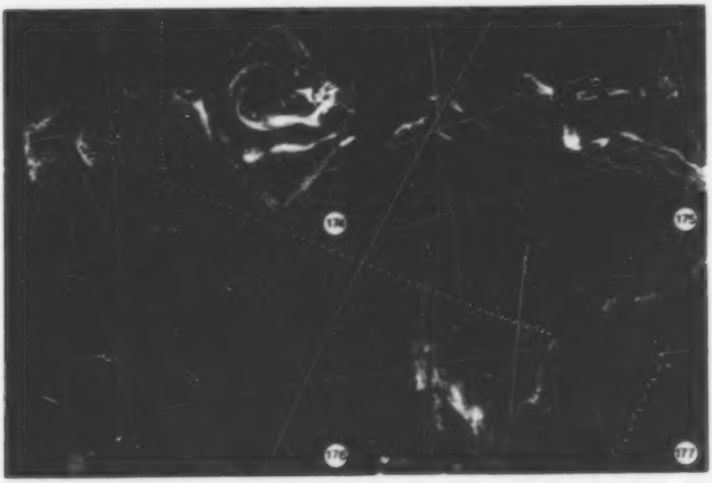


Plate 34 Figs. 174-177 - *Restisoma howdeni* n. gen., n. sp.: female; 174 - dorsal habitus; 175 - lateral habitus; 176 - head and anterior mesosoma, dorsal view; 177 - face.

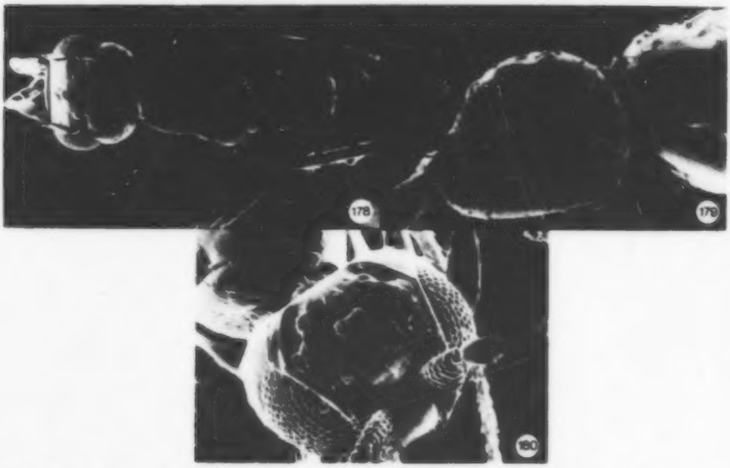


Plate 35 **Figs.** 178-179 - *Tetrapolynema* sp.: male; 178 - head and mesosoma, dorsal view; 179 - head, lateral view; 180 - *Stephanodes* sp.: female head, dorsal view.

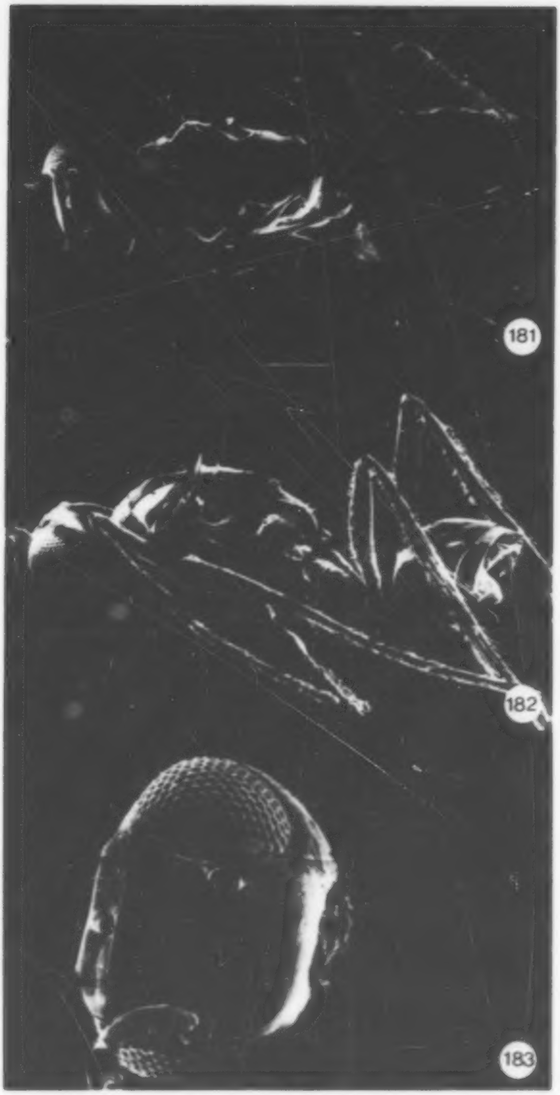


Plate 36 Figs. 181-183 - *Platyfrons helavai* n. gen., n. sp.: female; 181 - dorsal habitus; 182 - lateral habitus; 183 - face.

184
185
186
187

Plate 37 Figs. 184-187 - *Polynema* sp.: female; 184 - dorsal habitus; 185 - lateral habitus; 186 - metasoma; 187 - face.

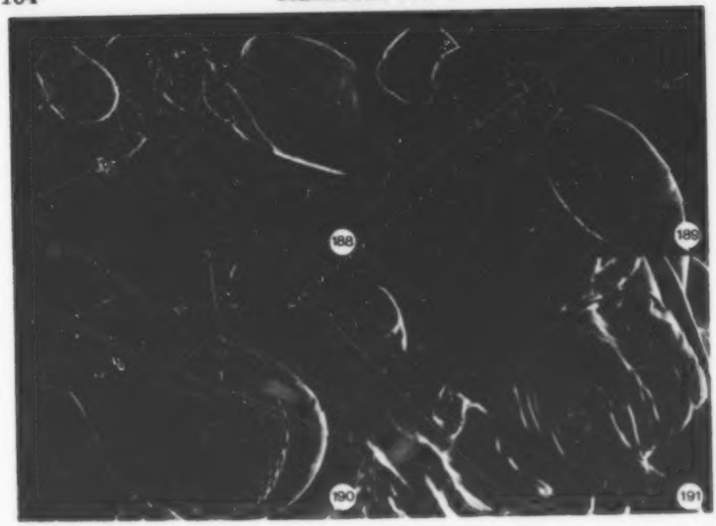


Plate 38 Figs. 188-191 - *Formicomymar venezuelaensis* n. gen., n. sp: female; 188 - lateral habitus; 189 - dorsal habitus; 190 - dorsal view of head; 191 -propodeum.

Index of generic, subgeneric and new species names

(Principal entries are in boldface; synonyms are in italics)

Acmopolynema Ogloblin 75
Agonatocerus Girault 36
Alaptus Westwood 23
Anagroidea Girault 42
Anagrella Bakkendorf 43
Anagrus Haliday 43
Anaphes Haliday 50
(Anaphes Haliday), **Anaphes** 52
Anaphoidea Girault 50
Anthemiella Girault 45
Antoniella Soyka 51
Arescon Walker 29
Australomymar Girault 48
Austranaphes Ogloblin 51
(Austranaphes Ogloblin), **Anaphes** 53
Barypolynema Ogloblin 82
boweni, n. sp., **Anagroidea** 89
Bruchomymar Ogloblin 59
Caenomymar n. genus 49
Callitriche Agassiz 82
Callodicopus Ogloblin 26
Camptoptera Foerster 32
(Camptoptera Forester), **Camptoptera** 33
Camptoptera (Zemicamptoptera) Ogloblin and Anneck 32
Caraphractus Walker 70
Chaetomymar Ogloblin 70
Chromodicopus Ogloblin 27
Clinomymar Kieffer 51
Cleruchus Enock 55
Cnecomymar Ogloblin 71
Congolia Ghesquiere 32
Cosmocoma Foerster 82
Cosmocomoidea Howard 36
Cremnomymar Ogloblin 66
Dicopomorpha Ogloblin 26
Dicopulus Ogloblin 27
Dicopus Enock 25
Doriclytus Foerster 81
eberhardi n. sp., **Entrichopteris** 99
elongatum n. sp., **Tanyostethium** 103
Enaesius Enock 45
Entrichopteris n. genus 62
Erdosiella Soyka 61
Erythmelus Enock 45
Eucleruchus Ogloblin 56
Eustephanodes Ogloblin 72
Eustochus Haliday 57
Eutriche Nees 81
Ferrierella Soyka 51
Flabrinus Rondani 50
Formicomymar n. genus 80
Fulmekiella Soyka 51
(*Gahanopsis*) Ogloblin, *Lymaenon* 37
Gonatoceroides Girault 36
Gastrogonatocerus Ogloblin 36
Gonatocerus Nees 36
Hadromymar n. genus 30
helavai n. sp., **Gonatocerus** 87
helavai n. sp., **Acmopolynema** 104
helavai n. sp., **Platyfrons** 108
Herulia Hedquist 32
Hofenderia Soyka 51
howdeni n. sp., **Caenomymar** n. genus 91
howdeni n. sp., **Restisoma** n. genus 102
Idiocentrus Gahan 47
Kalopolynema Ogloblin 72
Leimacis Foerster 29
Limacis Forester 30
Lithisca Ogloblin 24
Litus Haliday 24
Lymaenon Walker 36
Macrocamptoptera Girault 32
(Macrocamptoptera) Girault, **Camptoptera** 34
magnificum n. sp., **Ptilomymar** 93
Maidliella Soyka 82
Mariella Soyka 51
masneri n. sp., **Myrmecomymar** 84
masneri n. sp., **Gonatocerus** 88
masneri n. sp., **Notomymar** 92
Masonana n. genus 63
masoni n. sp., **Hadromymar** 86
Metalaptus Malenotti 23
Mymar Curtis 59
Myrmecomymar n. genus 28
Mymarilla Westwood 60
nearcticus n. sp., **Eustochus** 96
Neolitiscus Ghesquiere 24
Neolitus Ogloblin 24
Neomymar Crawford 60
Neostethynium Ogloblin 45

Nesopolynema Ogloblin 65
Neurotes Enock 30
Notomymar Doutt and Yoshimoto 46
Novickyella Soyka 82
Ogloblinielia Soyka 60
Omyomymar Schauff 48
Oncomymar Ogloblin 64
Ooctonus Haliday 35
Oophilus Enock 36
Packardiella Packard 43
Panthus Walker 50
Paracleruchus Yoshimoto 55
Parallelaptera Enock 45
Paranagrus Perkins 43
Parapolynema Fildago 67
Parvulinus Mercet 23
Patasson Walker 50
Patasson (Schizophragma) Annecke and Doutt 54
(Patasson Walker), Anaphes . 53
pecki n. sp., **Acomopolynema** 105
Platyfrons n. genus 79
Platypatasson Ogloblin 55
Platypolynema Ogloblin 73
plaumanni n. sp., **Acmopolynema** 107
Polynema Haliday 81
polynemoides n. sp., **Masonana** n. genus 100
Polynemula Ogloblin 67
Pteratomus Packard 43
Pteroclisis Foerster 32
Pterolinononyktera Malac 60
Ptilomymar Annecke and Doutt 57
Rachistus Foerster 36
Restisoma n. genus 68
Rhachistus Dalla Torre 36
Schizophragma Ogloblin 54
Scolopsopteron Ogloblin 65
Sphecomicrus Walker 35
Sphegilla Debauche 32
Stammeriella Soyka 51
Stenomymar Ogloblin 60
Stenopteromymar Ferriere 55
Stephanodes Enock 72
Stethynium Enock 44
Stichothrix Foerster 32
Synanaphes Soyka 51
Tanaomymar Annecke and Doutt 58
Tanyostethium n. genus 74
Tetrapolynema Ogloblin 68
Valkerella Westwood 70
venezuelaensis n. sp., **Formicomymar** 110
venezuelaensis n. sp., **Tanaomymar** 97
Xenomymar Crawford 30
Xenopolynema Ogloblin 82
(Zemicamptoptera) Ogloblin & Annecke, *Camptoptera* 32